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Mind Training for Children

Book Three

Helps in School

Mind Training *for* Children

Book Three

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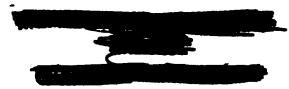

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BOOK THREE

HELPING YOUR CHILDREN IN SCHOOL.

The principles given in books one and two, leading to the development of the child's faculties find their greatest usefulness in school work. They will apply to every part of the child's work and aid in solving any of his problems.

This is the demonstration ground and the time and efforts spent in the preceding games and exercises will manifest themselves in progress in school.

It is best for the child to make his own applications. You can, of course, suggest and aid, but he should make his own picture wherever possible. The one making the effort receives the reward—which is development. The child will recall the idea which he works out for himself more easily than those worked out for him, even though the latter may seem better.

The following pages will be given over to suggestive ideas as to how the principles may be applied to different lessons. Only a few certain concrete illustrations will be given, as the working out of the details would rob the child of the opportunity and development to be gained by doing the work himself.

Children always learn the alphabet by pictures. Alphabetical books and blocks are made this way. This is because the child learns easily and quickly by this method. What is true in the early years is true in the later ones as well. Do not allow him to get away from this principle of learning by pictures. Follow the plan of teaching every thing possible by sight. Go out of your way if necessary to show him the thing he is reading about.

The suggestions under "The Mind's Eye and The Story" in Book Two should be continued. When the child has learned to read have him pause and visually review what he has read, that is, to stop and see a mind's eye picture while the book is closed.

To Remember What You Read.

The inability to remember what we read is without doubt a general failing and the greatest handicap to students.

Two of the objects to be gained by time spent in study are a thorough understanding of the subject matter and to so fix the thought in mind that it will be available for future use. It is well to realize that the scanning of the modern newspaper and careless or rapid reading causes many adults to forget what they read. We can so educate the physical eye that it can read an entire paragraph, or page while the brain is dormant and does not accept the impressions intended by the author. Often the phy-

sical action of turning the page awakens you to a realization of the fact that you have read the page but have absolutely no knowledge of its contents.

Eye and Brain Must Work Together.

This habit of careless reading must be avoided and for successful study the child should be aided in forming the visualizing habit.

"Thought Leads to Knowledge."

We cannot gain knowledge merely by reading. The value of reading is in the thought that it stimulates in the mind. We exercise muscles to get strength. You must aid the child in exercising his mental muscles by thinking in order to get mental strength. It is not what he reads, but what he thinks concerning what he reads that becomes his, and contributes to his education. Reading which stimulates no thought is a waste of time.

The disappointment felt in the lack of progress after time spent in study is not that we forget, but that we do not really "GET". This lack can be largely avoided in the child's training if you are willing to help in forming right habits.

Visualization the Greatest Aid.

The principle of visualization, as discussed in the first book, will prove of the greatest aid, because it is the natural method of using the mind.

To visualize the thought of the author will stimulate thinking, will increase the understanding of the subject matter, and at the same time make the strongest impression upon the brain and thus help him to remember.

The Mississippi Captain.

An excellent illustration of the use and value of visualization in learning and remembering was given by an old captain of a Mississippi River steamer. "Do you know how I learned the river", he asked; "well I just lay in bed nights and made a picture in my mind of the river and the course I had to steer. Then I would go over the picture and see every detail of it and review it several times. I'd sail up and down that river several times each night, I'd see every landmark and every danger point on each trip. That's the way I learned it and I became a captain when I was younger than many men who had sailed the river longer than I had."

The Artist's Picture.

When an artist seats himself before a new canvas he knows definitely what he is going to place upon it. He either has a model before him, or in his mind's eye sees a beautiful picture. He will give weeks, months, or even years of effort in order to place upon that canvas a picture equal in perfection and beauty to the one which he sees.

Notice that a mind's eye picture is often the starting point of the artist. He strives to place upon the canvas the reproduction of the idea which he sees in his mind.

He finishes and exhibits his work; you look upon the picture with your physical eye and through its agency the result of the artist's effort becomes a picture-impression upon your brain. You see what he saw, and the longer you gaze at the painting and the greater amount of detail you perceive, the more vivid it becomes and the stronger the impression upon your mind, therefore, the more perfect the memory of the picture. This is true of your own mind's eye picture for memory purposes.

The more detail you see in your memory pictures and the longer you continue to visualize them the stronger their impression.

The Author Is An Artist.

In a similar manner an author sits down with his paper and ink. He sees in his mind a picture which he strives to paint. He endeavors by his mastery of words to induce you to see what he sees. He also is an artist, his canvas is your brain, and if he succeeds it is there he must impress a picture. The words on the printed page and the function of your eye are simply agencies through which he must work.

Words are vehicles of thought and they are the author's colors; their function is to reproduce objects and conditions, by their use the author conveys to your brain the impressions of size, color, form, arrangement and every detail of his thought. A very few words will create a wonderful picture, which would require hours for the artist to paint.

When you look at the artist's painting your brain sees a picture. The writer, however, is using a code requiring translation by the reader. Words do not form pictures, they are merely agencies by the use of which you can guide your mind's eye in the formation of a real mental impression. The author succeeds in his effort just in proportion as you succeed in forming a picture of what he is describing. When you rob the canvas of your brain of the impression the author strives to place there, by letting your eyes pass over the words so rapidly that your mind's eye forms no picture, then the author has failed The mere reading of words makes no lasting impression upon the mind, but the forming of visual pictures does. You remember best those books which have consciously or unconsciously formed picture impressions on your brain. What you can now recall of what you have read is largely the recollection of these pictures.

Keep this illustration and these facts in mind in helping your children. Urge them to properly use the visual faculties and train their mind's eye to work with the physical eye.

Must Read Slowly.

Words are vehicles of thought and are used by the author to convey pictures to the mind, but at first the mind's eye is unable to picture the thought as rapidly as the physical eye can read. The first essential to remembering what you are reading is to read slowly, hesitating occasionally, to be sure that a picture is being formed.

The Dead Line.

Never read more than a single paragraph without stopping to test your understanding of what you have read. At the end of each paragraph there should be a dead line; in fact there is a dead line and he who reads carelessly and quickly beyond this line need not expect to remember. Put your finger between the pages, close the book, and review the thought of the paragraph. Now make a definite effort to visualize the picture in the author's mind. It is true that some passages make an easier mind's eye picture than others, but all will make one which can be used to help in formulating a definite understanding of the author's thought.

You cannot visualize a thing which you do not understand. The aim of your study is to comprehend the author. To visualize the thought of the paragraph will test your understanding. Making of a definite picture will increase your knowledge of the essentials. Form the habit of visualizing what you read. Do not be handicapped by doubt. Make an effort to formulate the main facts of the paragraph into an expression of your own. If you are by yourself, where you can do so, state your thought audibly, not in the words of the author, but express the thought and the facts accurately in your own words.

No knowledge is yours until you can tell it to some one else.

Use this test and tell it to some one, or if no one is handy tell it to your self, but do it audibly. This forces a definite expression which can only come from a definite understanding. Parents should question their children and encourage them in telling what they are reading and studying about. The audible expression demands definite knowledge.

The Student's Review Sheet.

If the child is reading something which he will wish to review, as in studying a lesson, a good plan to follow is to have a pad of paper by the side of the book. After reading the paragraph write down upon the pad the expressions and thoughts which the paragraph conveys to you. This is an excellent plan in all cases where the audible expression is not practicable. After the lesson has been gone over in this manner, preserve the review sheets containing the synopsis of the paragraph. Then for review, before the examination, a quick reading of these written expressions of thoughts, which the chapter contains, will eliminate the necessity of a further reading of the entire text.

Apply These Methods.

For a test read the following from "Brain and Personality" by W. Hanna Thompson. Follow the idea just suggested. Make a test, read slowly, form a mind's eye picture, think about it, and then tell the thought as nearly as possible to some one. All this may take some time and

effort at first but the use of these ideas will quickly form the mental habit. Once reading a lesson in this manner will give better results than many careless repetitions.

"In some fishes, such as the carp, when the ganglia, which corresponds to the cerebral hemispheres (brain) are experimentally removed, they do not seem to mind it at all, for even then there is little, if anything, to distinguish them from perfectly normal animals. They maintain their natural attitude and use their tails and fins in swimming with the same vigor and precision as before. They not only see, but are able to find their food. If worms are thrown into the water where they are swimming they immediately pounce upon them. If a piece of string similar in size to a worm is thrown in, they are able to detect the difference and they drop it after having seized it. They even, to some extent, distinguish colors for when some red and some white wafers are thrown into the water the fish almost invariably select the red in preference to the white

"It is much the same with a frog. If care be taken to keep the frogs alive after the removal of their cerebral lobes until they are quite recovered from the injury, brainless frogs will behave just like full brained frogs under like circumstances. They will crawl under stones, or bury themselves in the earth at beginning of winter, and after the period of hibernation is over, they will come out and diligently catch flies which are buzzing about in the vessels in which they are kept."

Longfellow's Picture "Evangeline".

Use this wonderful picture of Longfellow's. Let each word perform its intended function and each sentence form a complete picture.

"Firmly builded with rafters of oak, the house of the farmer
Stood on the side of a hill commanding the sea; and a shady
Sycamore stood by the door, with a woodbine wreathing around it.
Rudely carved was the porch, with seats beneath; and a foot-path
Led through the orchard wide, and disappeared in the meadow.
Under the sycamore tree were hives overhung by a pent-house,
Such as a traveler sees in regions remote by the road side.
Built o'er a box for the poor, or the blessed image of Mary.
Far down, on the slope of the hill, was the well with its moss-grown
Bucket, fastened with iron, and near it a trough for the horses.

Read again the first three lines, have the child describe the picture. An artist would spend hours to paint this picture, yet we with our wonderful mental facul-

ties can see it in an instant. Add to this picture, and when finished have the child give a prose description of it. Other examples for younger children are given in the Second Book on The Memory.

Application of Visualization Limitless.

By clear visualizations you can carry any amount of detail in your memory. This faculty can be applied to all kinds of information and study. All ideas do not suggest simple pictures, some are more difficult to visualize than others. Some pictures are inspired by a single word, some may be the result of a paragraph or even pages of description.

Helps for Learning Verbatim.

To learn prose or poetry should not be difficult for children who have been trained in visualization. In some schools they will be urged to use the fallacious method of repetition, some of it is always necessary, of course, but most of it can be eliminated by the use of visualization and the additional helps following.

It is the parents' duty to see to it that the child uses the methods suggested in these books in all his school work. Help him at home to apply them to his lessons so as to get results. At school he will, of course, have to follow the teacher's instructions, but can silently use the aids that you have given him.

Alliteration and Alphabetical Sequence.

These are two guides for the mind which are often wonderfully helpful although sometimes they do not apply, but use them where possible. Notice the Alphabetical Sequence and the Repetitions in the following example of the first verse of Walter D. Wintel's "Thinking"

"Thinking."

If you think you are beaten, you are;
If you think you dare not, you don't.
If you'd like to win, but think you can't,
It's almost a cinch you won't.

Notice that the first two lines are half repeated, also that each line begins with "If" except the last one which changes to "It's".

In the first lines you have an example of reversed Alphabetical Sequence in the "b" of beaten preceding the "a" of are, b-a instead of a-b.

Alphabetical repetition occurs as a guide in the second line in the "d" of "dare" and "don't". Again in the next lines in the "w" of "win" and "won't".

Note the alphabetical arrangement of the guide letters of each line. Write in front of each line its guide letter; first line "b" of "beaten", second "d" of "dare"; third "w' of "win", fourth the "w" of "won't", these can be used as guide letters, and if noted will help.

Take your pencil and mark the verse as suggested and use the words and letters as guides, go over it a couple of times noting these helps and you will be able to say it word for word.

Do the same with the other verses, if practical have the child learn this poem. See that he gets its true lesson:

"Thinking."

If you think you are beaten, you are;
  If you think you dare not, you don't.
If you'd like to win, but think you can't,
  It's almost a cinch you won't.

If you think you'll lose, you're lost;
  For out in the world we find
Success begins with a fellow's will,
  It's all in the state of mind.

If you think you're outclassed, you are;
  You've got to think high to rise,
You've got to be sure of yourself before
  You can ever win a prize.

Life's battles don't always go
  To the stronger or faster man;
But soon or late the man who wins
  Is the one who thinks he can.

Poetry Easier Than Prose.

To quote poetry is usually easier than to quote prose because in the former you have the added helps of rhyme and rhythm. See the pictures painted by Sidney Lanier in the following verses; note the repetition, alliteration and the help of the rhyme and see how easily you can learn a few verses of this poem:

"Vision."

It isn't raining rain to me,
  It's raining daffodils;
In every dimpled drop I see
  Wild flowers on distant hills.

The clouds of gray engulf the day
  And overwhelm the town;
It isn't raining rain to me—
  It's raining roses down.

It isn't raining rain to me,
  But fields of clover bloom
When any buccaneering bee
  May find a bed and room.

A health unto the happy,
  A fig for him who frets;
It isn't raining rain to me,
  It's raining violets.

See a man in the rain who points out the fact that it isn't raining rain, "but daffodils". See the daffodils. See big "dimpled drops" and paint upon them the "wild flowers on distant hills."

Repeat the picture a couple of times and then say the verse. Do the same with the other verses. Do not learn this by repetition. Be true to the method, make a picture and see it each time you review.

If a single word is omitted or substituted, put special auditory emphasis on it, speak it louder than the other words of the line, and you will have no trouble with it after that.

Bridging the Gaps.

The greatest difficulty which is experienced in memorizing poetry is to get from the end of one line to the beginning of the other, or from one verse to the other. In prose, when you start a paragraph it is not difficult to follow through to the end, because all of its sentences are associated in thought. But the new paragraph begins with a new thought and there is no association between the old thought and the new one, consequently there is a gap between thoughts across which the mind does not easily travel.

The natural tendency of the mind is to follow thoughts which are associated in their ideas. One thought leads to a second which is suggested by its close relationship to the first. By retracing the processes you can discover

the connecting thought, or bridge, over which the mind naturally travels in order to connect two unrelated thoughts.

In memorizing, when coming to the end of a thought, form a bridge which will connect it and the following thought and thus guide the mind to the next line or paragraph. This is a most helpful principle in memorizing either poetry or prose. If you seek for it you can find some similarity or contrast, a visual association, or some sequence, or repetition, which can be used as the necessary bridge, or connecting link between the two lines or paragraphs.

Always connect the last thought, the last word, or phrase of the line, sentence or paragraph with the first word in the succeeding thought. The process is much shorter and simpler than its explanation, as you will learn by practice. Try this plan once or twice and it will be well nigh impossible for you to memorize without it.

Examples of Bridging The Gap.

From "The Buccaneer" by R. H. Dana the last line of the second verse, and the first line of the third verse are easily connected by one word, Sand, thus—

"And silver waves go noiseless up the beach."

(Sand)

"And inland rests the green, warm dell;"

The last word "beach" naturally suggests sand, drop the s and you have the first word of the next verse, "and", also the "beach", sand, and "inland" suggest a natural

sequence. Sand here becomes a bridge of thought over which your mind will easily travel. It is not always easy to find one word for a bridge, but a visual picture, a thought, a word, or repeated letter can be found to aid you.

The poem "Things Divine" by Jean Brooks Burke is used by students of elocution as ideal for practice because of the difficulty which it presents. The thoughts cover a wide range with apparently no relation one with the other. Often two thoughts are expressed in one line, and to get them all well fixed in mind so as to repeat them makes the poem difficult, to say the least, yet you, who know how to apply your memory intelligently, may learn it with comparative ease. Read slowly and note the visual pictures and then go back and "bridge" them together. This is an excellent example of a difficult poem to practice upon. It will be an opportunity to use all of the principles given in this chapter.

The Things Divine.

These are the things I hold divine;
A trusting child's hand laid in mine,
Rich brown earth and wind-tossed trees,
The taste of grapes and the drone of bees,
A rhythmic gallop, long June days,
A rose-hedged lane and lover's lays
The welcome smile on neighbors' faces,
Cool, wide hills and open places,
Breeze-blown fields of silver rye,

The wild, sweet notes of the plover's cry,
Fresh spring showers and scent of box,
The soft pale tint of the garden flox,
Lilacs blooming, a drowsy noon,
A flight of geese and an autumn moon,
Rolling meadows and storm-washed heights,
A fountain murmur on summer nights,
A dappled fawn in the forest hush
Simple words and the song of a thrush,
Rose-red dawns and a mate to share
With comrade soul my gypsy fare,
A waiting fire when the twilight ends,
A gallant heart and the voice of friends.

To link the second line with the first, think of the natural association of thought between the words "Divine" and "trusting." Form the definite visual picture of the "trusting child's hand laid in mine."

Your thought will quickly pass to the duplex meaning of the word "mine." It means possession, my own, and also a mine in the earth. When we start a mine the first thing to come out is "rich brown earth" and that is the next thought. Let the word "mine" of the second line suggest the picture of the opening to the mine and the pile of "rich brown earth" beside it.

Behind a pile of rich brown earth, see the "wind-tossed trees", the next thought. Hanging on the "trees" see huge bunches of grapes, you pick and taste one, this is the next thought, "the taste of grapes." Around the

grapes flies a swarm of bees, hear their "drone," the next thought, "the drone of bees." Let the drone of the bees suggest to you a rhythm and this will bridge your mind over to the thought of a "rhythmic gallop"; the answer to the question, "When do you like to gallop?" suggests "Long June days" the next thought.

June is the time of roses, suggesting "A rose-hedged lane"—the natural place for "lovers' lays." You can easily construct a "bridge" which will bind all the independent thoughts together. Visualize each thought, and watch for alliteration and alphabetical repetition.

Remembering What You Hear.

It is also important that the child be trained to remember what he hears. Ear impressions are comparatively light and easily lost. If these ear impressions are quickly transferred into mind's eye pictures they will be far more lasting.

Instructions, lectures, sermons, talks, can all be pictures in the mind, just as you picture what you read. The act of visualization will concentrate the attention and prolong it, so that the memory of what is said will be greatly increased. The visual impressions will also be much stronger than the auditory ones.

> The attempt to visualize the thought of the speaker is the best method of directing your attention to his subject.

Use the Hitching Post.

When listening to instructions, or a lecture, in which there are different points which you wish to carry away and later recall accurately, use the Hitching Post idea. Run over a series of words so as to be sure that they will come readily when wanted. When a point is made which you wish to remember, transfer the thought into a quick visual impression, and Hitch it to the first object of your list. When a second important point is made, make a visual impression with the next object. Make your picture strong by exaggeration and motion, and be sure that you photograph each one.

In this manner you can file away any number of points. As soon as the lecture is over review the pictures, see each clearly a second time. If you have trouble recalling one make the picture stronger so that you will recall it more easily next time. Review the entire list of points visualized with the different Hitching Posts. If you wish to fix them in mind review them several times in the next few days, so that you make a permanent impression of them.

Transfer To Note-Book.

A great many prefer the idea of transferring these points into a classified note book, where they are available for use at any future time.

One student tells of having written fifteen pages of notes from four talks which he heard at a convention,

and that some of these notes were not transferred from his mind to the note-book for at least ten days after the talks were heard.

Form the habit of letting the lecturer make you SEE what he describes. The visual impression which you make will increase your understanding of anything you hear or read, and at the same time very materially assist you in remembering it.

Taking Instructions.

When a person is giving you instructions about the things which he would like to have you do, follow the same plan. Simply transfer the words of the speaker into an exaggerated moving picture and the impression will stay with you. Another student told me this experience: "My employer often used to say to me, after having given some instruction, 'Do you see?' I realize now that the reason that I made so many mistakes was because I did not SEE. Now I make it a point to SEE the things he asks me to do and my reply, 'Yes, I see,' has a very different meaning. The results are also different."

Mastering Difficult Lists.

In the child's studies there are often lists of different kinds which need to be committed to memory and which present considerable difficulty to say nothing of the time required. Following are aids and illustrations which will show how these lists can be mastered with comparatively small effort and little time.

Fix In Mind By Initialing.

Take the initial letter of each of the words which you wish to remember and use these as the first letter of simple words which will combine into an expression which has a meaning. This is very helpful, and is sometimes called "initialing." We have all learned the sentence:

E G B D F
Every Good Boy Deserves Food,

in order to remember the names of the lines of the treble clef; the letters of the word FACE are the spaces. In a similar way the lines of the bass clef can be remembered by the following:

G B D F A
Good Bees Deserve Faithful Attention,

and the spaces by:

A C E G
All Can Eat Goose.

These are simple examples of a principle which can with a little ingenuity and imagination be applied to any list to be learned.

Elevated Stations.

The following illustration shows how a student learned the stations on the Northwestern elevated road in Chicago, and will give you a further example of the use of this principle:

I can see Chicago's Oak, divided between Schiller and
Kinzie, Chicago, Oak, Division, Schiller

Sedgewick for luring a bee to Halstead's willow
Sedgewick, Larrabee, Halstead, Willow,

center. Webster Fullerton writes Diversey that
Center, Webster, Fullerton, Wrightwood, Diversey,

Wellington Belmont is the clerk to add three days'
Wellington, Belmont, Clark, Addison,

grace to Sheridan's bill for Wilson.
Grace, Sheridan, Buena, Wilson.

Here only the principal words of the story are used as the names to be remembered. The story simplifies the work of preparing and learning.

Learning the Presidents.

A further plan is the following combination of the Reminder Picture and the Visual Story used to learn the names of the Presidents of the United States in the order of their term of service. Go over the following Story Picture, visualize it clearly and then from the picture repeat the capitalized words in their order. When you can say the list readily, either forward or backward,

go over it again slowly, seeing the object and speaking the name of the President for which it is a reminder.

The Picture.

See some WASHING hanging on a line. See ADAM looking wonderingly at the washing. Then see Little JEFF, of "Mutt and Jeff", come up behind Adam. Jeff turns away, and falls over a MAT. Under it see some MONEY. Pick up the money and you find an AD. Take the ad and paste on a SHACK. See a moving VAN back up to the shack, and when the driver jumps down from his seat you recognize HARRY (a friend of yours by that name). Harry takes off his TIE and hangs it on a POLE, the pole falls over and hits the TAILOR who runs up on a FILL, from which he sees a PIER extending into the water. On the pier is a BIG CANNON from behind which jumps a LYNX and almost catches JOHN, who runs away, and climbs on a piece of GRANITE. On the other side of the granite is a pile of HAY, and rolling off the hay is a GARFISH. There stands an ARTIST with a CLEAVER in his hand, which he throws at HARRIS (a friend by that name.) Harris picks some CLOVER, and pins it on his MACKINTOSH, and it turns into a large red ROSE. In the rose he find some TAFFY, which he throws into a WILLOW.

From this story the capitalized words are reminders for the names of the Presidents, as follows:

WASHING Washington	ADAM Adams	JEFF Jefferson	MAT Madison	MONEY Monroe
AD Adams	SHACK Jackson	VAN Van Buren	HARRY Harrison	TIE Tyler

POLE Polk	TAILOR Taylor	FILL Fillmore	PIER Pierce	BIG CANNON Buchanan
LYNX Lincoln	JOHN Johnson	GRANITE Grant	HAY Hayes	GAR-FISH Garfield
ARTIST Arthur	CLEAVER Cleveland	HARRIS Harrison	CLOVER Cleveland	MACKINTOSH McKinley
ROSE Roosevelt	TAFFY Taft	WILLOW Wilson		

Do this for practice and see how easily you can learn the names of the Presidents in their proper order and say them backwards and forwards.

Studying Anatomy.

Initialing has been used by medical students with splendid results and has reduced the labor of learning to a minimum. The branches of the external carrotid arteries can be remembered by the following sentence:

Some Try Large Feats, Others Prefer
Superior Thyroid, Lingual, Facial, Occipital, Pharyngeal,

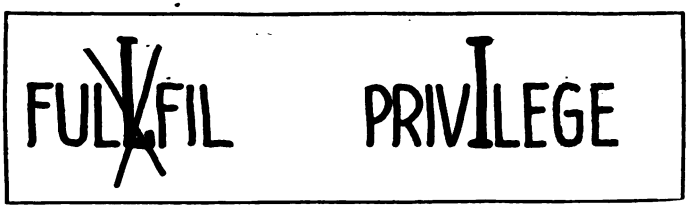
A Simple Task In Memory.
Auricular, Superficial, Temporal, Internal Maxillary.

For practice make a sentence of your own from the initials of the twelve pair of Carranial Nerves, which are Olefactory, Optic, Motor Oculi, Pathetic, Trifacial, Abducent, Facial, Auditory, Glosso-Pharyngeal, Pneumogastric, Spinal Accessory, Hypoglossal. For example, Oh! Out Motoring Papa Took A Friend And Got Paul Some Heather. Others can be made, but the one which the child makes for himself he will remember easiest.

BECOMING A GOOD SPELLER.

Poor spelling is largely a matter of inattention. Continual inattention becomes a habit and the child soon finds himself decidedly handicapped by his inability to spell correctly. This is largely caused by uncertainty. He has no definite knowledge to resort to, the result being doubt as to whether the word is properly spelled, and therefore uncertainty as to what change to make. To read a word carefully and to study the letters as they appear in the proper sequence will usually be sufficient to fix the word in mind.

When you find that certain letters, or combinations, are bothersome, use the principle of exaggeration. Have the child write the word and exaggerate the letters that are causing trouble, making them three or four times larger than the rest of the letters of the word. For example, the word PRIVILEGE, often incorrectly spelled PRIVELEGE. Write the word correctly and enlarge the "I," making it several times the size of the other letters; now have him form the visual picture of the word spelled in this way:



In writing the word hereafter you will find that the visual picture of the word with the exaggerated letter will come back to his mind and give the correct spelling.

In cases where it is a question of a single, or double consonant, for example, the word "fulfil" write it "full" and mark a large X through the second "L."

This will impress upon his mind that one "L" is correct.

Rules in spelling as a general thing, are not as helpful as a little care, observation and commonsense. The most troublesome is the "I"-"E," and this one rule should be clearly fixed in mind:

"I" always comes before "E," except when following "C," or when sounded as "A," as in "Neighbor" and "Weigh."

Notice the word "Alice." Keeping this one word in mind will serve largely to overcome this difficulty. "I" follows all letters except "C," which is followed by "E" as it is in "Alice." To fix in mind the "E" following "C" it will be helpful to show the child the similarity of motion and appearance in writing "C" and "E." Many ex-

amples could be given of this "I"-"E" rule. It will serve very largely to fix it in mind, however, if you will have the child hunt out these examples for himself and make a list of them.

Use Visualization.

Teach the child to visualize the words which he studies each day in his spelling lesson. You may not be able to visualize them yourself, but if you have started early in training him, he will have little difficulty in doing so. Exaggeration should be used as an aid in spelling. It will be easier to see the words printed in letters from three to six feet high on the wall of the room, than to see them in pica type on the paper. If your child has difficulty in visualizing the words in the spelling lesson have him exaggerate and color them in his mind's eye picture.

Have the child take a piece of scratch paper and colored crayons and print the difficult words in large letters, using two colors, one for consonants and the other for vowels. If the child has difficulty in learning the sequence of "ie" and "ei" have him follow the plan of using two strong colors, such as red and blue for the two vowels. Have him print all the words with which he has difficulty, using red for the "e" and blue for the "i." This color impression combined with the enlarged letter, will overcome the difficulty.

Spelling Exercise.

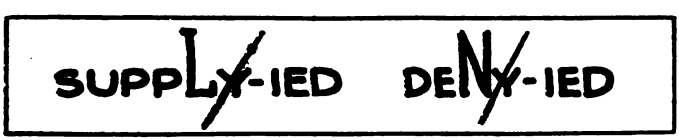
In order to help the child to become sure of himself write a list of words spelled incorrectly. Have him go over them and correct them, or tell what the error is.

Spelling rules should be learned by making visual pictures of the word to which the rule applies, and not by simply learning a group of words, the meaning of which sometimes is not fully appreciated.

An Example.

Rule—Final "y," when preceded by a consonant, is changed to "i" before any suffix not beginning with "i."

To learn this rule have the child print out a few examples, as follows, enlarging and striking out the important letters:



Rule—Final "y" preceded by a vowel is not changed to "i" before any suffix beginning with a vowel.

plAy-ed delAy-ed

Have the child print these examples and enlarge them. All rules should be illustrated in graphic form.

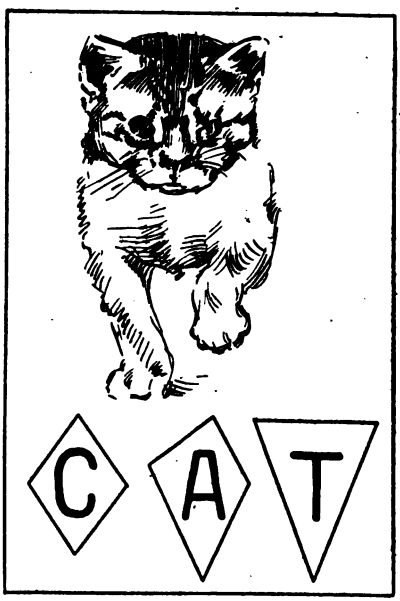
The Spelling Cards.

For younger children the brightly colored A, B, C, blocks and picture books have always been helpful in teaching the alphabet and simple words. These spelling

cards have the advantage of self-instruction with no possibility of mistake, so that the child teaches himself accurately and uses the visual sense in doing so.

These spelling cards consist of a series of simple pictures on cardboard with irregularly shaped holes cut beneath, a hole for each letter in the name of the object in the picture.

The needed letters of the alphabet can be made from cardboard, each on a card of separate shape, so that it will not fit into any hole except where it belongs to properly spell the word illustrated. The holes in the picture will correspond to the shape of the cards which spell the name. In this way there can be no error. The child can take the picture cards and find the proper letter cards to fit the holes under the picture and thus learn to spell the name. These Spelling cards can be made by pasting pictures of common objects on cards about 4x6 inches. Then cut the odd shaped pieces for the principle



letters of the alphabet, using the same shape for the same letters, mark the proper shapes for the letters spelling the name of the object on the card, and cut them out with a sharp knife.

The shapes for the letter cards can be similar to those suggested in the Game of Matching Cards in Book One.

Suggested objects for the picture cards:

Cat, Rat, Boat, Apple, Boy, Girl, Fan, Pig, Car, Dog, Bird, Rose, Bee, Egg, Spoon, Horn, Frog, Man, Cow, Ball, Baby, Chair, Watch, Saw, Hammer, Nail, Coat, etc.

The Game of Word Making.

This game was at one time quite popular and should be revived and used often. It teaches spelling and increases the vocabulary.

The only equipment is a series of cards of any size larger than an inch square. On these print letters of the alphabet or cut large black letters from the headlines of the nawspapers and paste them on. There should be about six of each of the vowels, two of all the consonants, and three or four more of those most used.

Turn all the cards face down on the table and mix them thoroughly. The first player picks up a card and lays it face up in the center of the table, the next player does the same, and so on. The first child to make a word of the letters turned up speaks the word, selects the letters to properly spell it and lays them side by

side, spelling the word. If it is properly spelled he gets one point, but if he has not spelled it correctly he loses one point, and the letters go back into the draw pile.

Each properly spelled word counts a point for the child first calling it. A limit of points can be set and the first one reaching that score wins. If older persons wish to play the game a limit may be set on the size of the words spelled, as no word of less than 6, 8 or 10 letters whichever figure is decided upon.

The Game of Salvaging Words.

Pick a large word to pieces and see how many smaller ones can be made from the letters contained in it. This is a good exercise for persons of any age and is often played at parties.

Give each player a paper and pencil, select some long word and let each write it at the top of his paper. Determine on a time limit usually five minutes, and see who will make the most words from the letters of the larger word.

After the time is up the one having the longest list wins. It will be interesting and helpful to have the long list read, each checking the words on their list. Then let each one read the words which they made and which no one else has read. It will be surprising how many different words there will be. Use words like:

Conflagration	Washington	Imperceptability
Consternation	Gubernatorial	Permeability
Understanding	Examination	Responsiveness
International	Immovability	Stenographer

The Game "The Camels Are Coming."

This game should never be allowed to grow old. It is "lots of fun" at parties and helpful in vocabulary building, because it requires an effort, and every time you induce yourself, or your child, to make an effort good is accomplished.

Have the group sit around the room and then begin by selecting a letter and a suffix, as B-ing. The one starting says to the one on his left "The camels are coming." He replies "How are they coming?" The beginner must then reply using one word beginning with B and ending with "ing". For example: Buzzing—Bleating—Braying—Blushing—. Each player must think of a word to give as his answer. All must remember the words that have been given and must answer inside the limit of ten seconds after the other has said, "How are they coming?" And word that is in the dictionary can be used. If a player cannot answer in ten seconds he must sit on the floor of the room and pay a forfeit to the timekeeper.

This game can be varied in a great many ways, the words can begin with any letter and end with any suffix or begin with any prefix.

Learning Synonyms.

To help the child remember synonyms and to increase his vocabulary write a list of words and have him write opposite them as many words of similar meaning as he can. For example:

HOUSE—residence—building—dwelling—abode.

TRAVEL—journey—trip—tour.

THE STUDY OF GEOGRAPHY.

Most children will like the study of geography if it is given to them in stories and pictures as much as possible. Note how the more modern geographies are literally picture-books compared with those of several years ago.

Teach the child to make the pictures in the book his permanent knowledge through visual reviews. When he is studying about an isthmus, and there is no picture of one in the geography, find one elsewhere. Have the child notice clearly that "An isthmus is a narrow strip of land connecting two larger bodies". Take the outline maps and have the child go over them and point out all the examples of the isthmus. Now have him take a pencil and paper and draw one. Have him repeat the definition as the teacher wishes it to be learned, but be sure that he can SEE and explain it in his own words.

Fix one definite illustration of each geographical division in the child's mind. Use the Isthmus of Panama for the isthmus, explaining to him that this location was selected for the Panama Canal because it was a narrow strip of land, etc. Make it interesting by stories.

In your walks with the children through the country take every opportunity to explain the different geographical formations. Find an illustration for an isthmus even if it is only a small puddle, or if you have to make one in the back yard with a shovel and a pail of water. The sand-box method, because it is visual, has always been a successful one for teaching geography.

Visualize the Map.

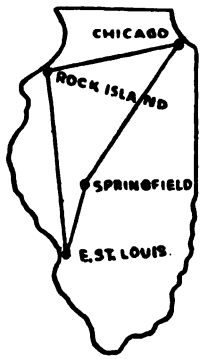
See clearly the outline of the country being studied, and note its peculiarities. Put the map at arm's length and let your imagination transform the contour of the country into the picture of some object.

Note that the continent of South America is very similar in shape to the head and trunk of an elephant, the projection on the Northeast corner being the ear. Note the similarity in shape between the outlines of France, Spain and Portugal to a hog's head eating from a bucket. The continent of Australia easily becomes the shape of two animals' heads, back to back.

To study any country follow the plan outlined in the next two paragraphs for the study of the states of Illinois and Indiana. Note carefully the outline of the state, and see just the shape which it forms. Note the location of the principal cities and get their relationship to each other.

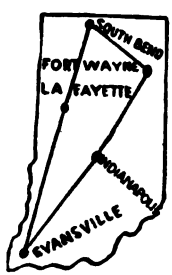
Illinois.

Take your pencil and draw an outline of this state, then a line from Chicago to Rock Island, from Rock Island to East St. Louis, from East St. Louis to Springfield and from Springfield back to Chicago. Notice that the line connecting these cities forms a triangle. Get the visual impression of the triangle in mind. Now close your eyes and see if you can see the outline of the state clearly and upon it the line joining the principal cities.



Indiana.

In like manner note the state of Indiana, its outline and the triangle formed by the line running from Indianapolis to Fort Wayne, to South Bend, to LaFayette, to Evansville, and back to Indianapolis. Any state may be studied in this way, or any country or continent. Its size, shape, and the location of the principle cities may be indelibly fixed in mind.



You will find that impressions made upon the mind in this visual manner are lasting, and that you can gather knowledge of geographical locations which hitherto may have been difficult for you to retain.

After you have once impressed these pictures upon your mind, close your eyes again and let your mind's eye see them. The location of cities, mountain ranges, rivers, etc., need simply to be visually impressed in this manner. Draw a line from one principal city to another. Notice the length and direction of the line and the figure made by joining them. Draw the lines with your eyes closed until you have a clear mind's eye impression of the exact locations.

Follow this plan in teaching the child to visualize the map which he is studying. Do it with each state, and each continent, island, or country.

Draw a plain outline map of the continent being studied, let the child draw in the principal rivers and mountain ranges, writing the name of each. Explain how these mountain ranges and large rivers, because of the natural defence offered, have become the natural boundaries between nations. Now have the child draw each country on a blank map, writing the name of each and placing a dot where the capital of the country is located, and naming it.

Of course it is not likely that the child will be able to do all this without reference to the map. The map of the continent should be visualized by a definite effort. Let him go over a section at a time noticing the mountains and rivers, their use as boundaries and the countries which they separate. After this detail study have the child observe the map as a whole, and build its visual picture in his mind. From this visual picture have

him draw all the details possible on the blank map. Let him go back to the map of the continent, study the points missed, revisualize the picture, close the book, and add as much as possible to the map he is drawing.

Do the same with the map of the United States. Have the child become familiar with the outline, the rivers, mountains and Great Lakes. Next have him become familiar with the groups of states, as the New England States; the Middle Atlantic States; the Southern States, eastern and western divisions, etc. Each of these divisions can be visualized separately, the outlines of the states and the location of the capital learned, so that an outline map of the group can be drawn as was done in the case of the continent and its countries. If this process is continued a very little study of the United States as a whole will enable the child to draw the entire country and locate all the states and their capitals, a thing which only a very few grown people can do.

Learning the Groups of States.

The use of initialing will help in learning the names of the states in their different geographical groups. Use the initial of the states in the group and make a sentence using these initials as the first letter of each succeeding word. Fix the sentence in mind and when you wish to name the states let the initial or name act as a guide and suggest the name of the state. Use the sentences following, or make others of your own.

New England States.

May's New Hampshire Views Might
Maine New Hampshire Vermont Massachusetts

Connect Rhode Island.
Connecticut Rhode Island.

Middle Atlantic States.

New York's New Jest Puts Delaware
New York New Jersey Pennsylvania Delaware

Many leagues West (of) Virginia.
Maryland West Virginia Virginia.

Central States.—Eastern.

Oh! I K(C)an take Ill With cousin Mich.
Ohio Indiana Kentucky Illinois Wisconsin Michigan.

Central States.—Western.

Miss I O Minnesota K(c)an Neighbor North
Missouri Iowa Minnesota Kansas Nebraska North

and South Dakota.
Dakota South Dakota.

Southern States.—Eastern.

No Southern Car Goes Far
North Carolina South Carolina Georgia Florida

All-a-board Miss Tennessee.
Alabama Mississippi Tennessee.

Southern States.—Western.

Ark an	Louise	Take	Okla home.
Arkansas	Louisiana	Texas	Oklahoma.

Western States—South.

Californians	Never	Use	A	Newly	Made
California	Nevada	Utah	Arizona	New	Mexico

Color.
Colorado.

Western States.—North.

Why!	Ida	Might	Wash	Ore.
Wyoming	Idaho	Montana	Washington	Oregon.

In order that there be no omission of any sentence it is only necessary to note that there are eight groups and four pairs: New England and Middle Atlantic; Central East and West; Southern East and West, and Western North and South. As a further check for accuracy notice the groups as in pairs above; the first pair has 6 and 7 states; the second has the same, 6 and 7; the Southern has 7 and 4, and the Western has 6 and 5. The first two groups have 13 each and the second two groups have 11 each.

Puzzle Maps.

The common jig-saw puzzle maps have value if accurately cut. A splendid game for learning the states of the United States, their shape, size and relative posi-

tion, can be made at home. Lay a map of the United States on a piece of good cardboard, trace the outline of each state and then cut them out on the state lines with a sharp knife. Have the child first learn to name the states by seeing the blank pieces of irregularly shaped cardboard. Then let him learn to put the pieces together, naming the states as he does so. This plan can be followed in studying the counties in your state or the countries in a continent.

The Blank Map.

Another helpful method is to draw an outline map of the United States on blank paper, drawing in each state. This can best be done by using impression paper. Now have the child take the map with the outlines of the states and write in the name of each.

The Geography Game.

Have cards cut on the lines of the different states of the United States. You can use the ones made for the puzzle map above. On each state card place three spots in the location of the capital and two principal cities. Prepare a series of three cards about 2x3 inches for each of the states, and on each print the name of one of the three cities mentioned so that for each state there is a book of four cards, the plain outline card of the state, a card bearing the name of the capital, and a card for each of the two principal cities. Below the name of the city can be drawn an object, or a word which will indicate the

approximate population of the city, by the Number Code. Make a similar set of four cards for each state, the state cards to be cut on the map outline, but not to have the name of the state on them; nothing but three spots in the location of the cities mentioned.

Some states can best be made in a group because of their comparative size. Vermont and New Hampshire can be on one card; Massachusetts, Connecticut and Rhode Island on another, and Maryland and Delaware another. Only three cities should be marked on the cards of these groups, always using the capitals of the states.

The state cards and the city cards should be shuffled separately, the state cards laid to one side as a draw pile, and the city cards divided among the players. The first player draws a state card and lays it on the table and has the first opportunity to play with it any city card he holds. The player to the left has the next turn, and so on, until someone has laid down the last of the three city cards belonging to this state card and takes the book. The one playing the last city card is entitled to the book and has the privilege of drawing the next state card. The one securing the largest number of books wins.

Any player playing a wrong city card on a state card must forfeit the card to the one who started with the state card.

This game requires that the players recognize the state by its outline and know the name of the capital and the two principal cities of the state, and of course, in which state each city card belongs.

The same game can be arranged for the countries of Europe, South America or any other continent. The card can bear the names of the capital, the principal river and mountain range, or the capital and two principal cities.

Following the Travelers.

Have the child follow the travelers in the following stories by actually seeing the geographical formations as they are named. Then have him repeat the itinerary by referring to the picture of the geographical formations. You will find that he can visualize the isthmus, plateau, etc., only after having a clear knowledge of what each is. This repeated visualization will make a lasting impression upon his mind.

The Story.

A man and a boy were out sailing, when a strong wind blew them ashore on a POINT, opposite a small ISLAND. They dragged their boat across an ISTHMUS and soon reached the PENINSULA, where they landed in a BAY. They started out in opposite directions looking for drinking water. The boy followed up a RAVINE and found himself on a PLATEAU. He became lost in a SWAMP and came out on a PRAIRIE, and in-

quired at a village where he found that he could return by following a RIVER through the VALLEY. He made a raft and floated down the river until he was stranded on a DELTA. He waded ashore and was soon back at his boat.

The man climbed a MOUNTAIN and looked out over the DESERT, where he saw an OASIS. Then he climbed over a CLIFF and followed a CANYON back to the BAY.

The Travel Game.

Give the child the blank outline of the country in which you are going to tell the story of your travel. Have him locate on the blank map each city you visit and draw a line from one to the other showing the route which was followed.

An Example: England. I went to England and landed at Liverpool. I went by rail from there to London, stopping one day at Gloucester. From London I went by water to Portsmouth.

In this story you can ask the child to tell you what kind of houses the inhabitants live in. You can take a ship and be collecting a cargo at the ports. Ask the child what local products are most easily found, and other questions which will show what these people export. Also the customs and commerce of the country in which the story is located can be discussed.

STUDYING HISTORY.

The study of history is largely a matter of Remembering What You Read. Children who have difficulty in remembering what they read, as a rule, do not like to study history. The lesson made into a visual picture will fix the points in mind with one reading, but this reading must not be careless or hasty. Help the child to read slowly and to pause long enough to make a mind's eye picture of each circumstance and change. It will be helpful to take a piece of paper and draw the scene of the battle. Mark in roughly the hills, mountains and rivers. Show the positions of the opposing armies, then roughly sketch the changes which take place. This drawing will help you to make a definite picture impression.

Take advantage of the pictures on the page of the book. The child's mind will naturally associate with the picture the many circumstances happening before and after, if he hears or reads them while the picture is visible.

For example, the picture of the landing of the Pilgrims on the shores of Massachusetts will bring to mind the facts which lead to their making the journey. It will also suggest circumstances after the landing.

Those stories and facts which the child hears, while looking at the picture, are joined with it in the mind by the law of association, and the operation of the same natural law will tend to recall them whenever the child sees the picture.

A series of large pictures, which all of the class can see while the history lesson is being studied and recited, would help in fixing the facts in the minds of the children. Children who are taught to visualize can form their own pictures and have a wonderful advantage.

Remembering History Dates.

This troublesome matter is easily mastered when the child understands the use of the number code as given in the book on Memory. This principle can be applied in every case. As a rule, the century in which the date occurs is not confusing, and the effort can be confined to the particular year. For example, in order to remember the date of the Battle of Bunker Hill, it is only necessary to remember '75, for the year, as every student will know that it was in 1775 and not 1875, or 1675.

A boy twelve years of age learned more history dates in one week after knowing how to use the Number Code than he had learned in weeks before. The knowledge of how to visualize the lesson and how to remember the dates will overcome any prejudice or any difficulty which the child may have with history lessons.

The following are samples of how the Number Code has been applied to remembering history dates.

Landing of theEnglish at Jamestown, 1607. During the first years there was much sickness and the word SICK is '07. The picture of the Jamestown settlers "sick on the beach" will fix the year in mind.

The following dates were in one lesson, and are the word-pictures which a child used in remembering them. Marquette and Joliet explored the Mississippi River in 1673. The word COMB is '73. They were "combing" the river.

LaSalle reached the mouth of the Mississippi River in 1682. He planted the French flag and had a celebration. FUN is '82, they had fun when they planted the flag.

New Orleans was settled by Bienville in 1718. He had a hard time finding a good place for the city, TOUGH (tuf) is '18, they had a tough time.

Washington and the Virginian troops drove the French troops from Fort DuQuesne in 1754. He drove them from their LAIR, '54.

General Braddock was defeated and killed in 1755. He was buried in the woods of Pennsylvania. '55 is LILY, see a lily on his grave.

Some other examples follow: Alaska was purchased in 1867. 18 may be DOVE and 67 CHECK, a picture of a DOVE flying to Russia with the CHECK. Or if you prefer you can use the two words, STOVE-SHACK, or TOUGH-JOKE, it was a tough joke on Russia to buy it for so little.

The Battle of Bunker Hill was June 17th, 1775. This can be remembered by the association SHOOTING KILL. Sh is 6; TING is 17; KILL is 75. 6-17-'75 is the date and it is in the two words SHOOTING KILL, which is easily remembered with Bunker Hill.

The Battle of Bull Run, July 21st, '61. This is 7-21-'61. CAN'T SHOOT (because they ran so fast they couldn't shoot) and the two words CAN'T SHOOT stand for 7-21-'61.

Peary reached the North Pole April 6th, 1909. This can be represented by URGES UP. This is 4-6-'09. He urges his men up to the pole.

Panama Canal was officially opened August 15th, 1914. This is 8-15-'14. VITAL DOOR will represent these numbers. The canal is a VITAL DOOR between the two great oceans.

Examples of the dates of the reigns of the English kings at the end of feudalism. The War of Roses.

Order of Reign.	**Code Words.**
1—Henry IV 1399-1413	Tie—Henry—hear, them pipe —their doom.
2—Henry V 1413-1422	Snow—Henry—lie, to redeem —true nun.
3—Henry VI 1422-1461	Home—Henry—show, true nun to our chateau.
4—Edward IV 1461-1483	Wire—Edward—hear, a deer shout their fame.
5—Edward V 1483	Wheel—Edward—hail, true fame.
6—Richard II 1483-1485	Sash—Richard—no, true fame —dare fail.

Here the Code word TIE stands for 1, the first king—Henry hear, for Henry fourth; "them pipe" is 1399; "their doom" is 1413. The whole can easily be visualized into a picture of Henry using the TIE to make an ear trumpet to HEAR THEM PIPE THEIR DOOM. A peculiar idea, perhaps, but it will accomplish the purpose. Use the same plan for other similar lists and make strong picture associations and they will aid you greatly. They can be recalled when the numbers can not.

The following are examples of dates of Greek and Roman History:

Draco codifies Laws of Athens, 621. Joined—He joined the laws.

Peloponnesian War, 431-404. Remote—Razor.

Corinthian War, 395-387. Mabel—Moving.

Alexander King of Macedonia, 336-323. May homage—My name.

Founding of Rome, 753-(?). Column.

Rome supreme in Italy, 264. New Chair.

Sack of Rome by the Gauls, 390. Mobs.

Great Latin War, 340-338. Mars—May move.

Peace between Rome and Carthage, 201. Nice Tie.

Julian Emperors, 27 B. C.-41 A. D. INK Bottle Can—RIDE After Dark.

Claudian and Flavian Emperors, 41-96. Red—Badge.

Good Emperors, 96-180. Push—Thieves.

Invasion of Barbarians, 337-376. May make—My cash.

Charles the Great crowned Emperor of the Romans, 800 Vices.

The History Game.

Secure pictures of the principal events in history and paste them on a series of cards. Have nothing on the cards but the picture, no printing, or names. Take three blank cards about 2x3 inches and on the first place the date of the event; on the second the names of the leaders; if a battle, the opposing generals; on the third put the name of the peoples concerned.

For example, first card, a picture of the Battle of Bunker Hill; second card, June 17th, 1775; third card, General Wm. Howe and General Joseph Warren; fourth card, British and American colonists.

A series of such cards should be made covering the events that are being studied at that time. The pictures are shuffled and laid in a draw pile on the table, and the cards are shuffled and dealt to the players. The one to the left of the dealer draws and plays a picture into the middle of the table, and then any cards which he holds which belong with it. The next player has the next opportunity to play, and so on around the group. The player who places the fourth card takes the book and is entitled to draw and play a picture into the center of the table.

Any card which is played in error that does not belong with the event in the picture shall be forfeited to the one who started the play with the picture card. The one getting the most books wins.

The Game of Famous Men.

Secure the pictures of a group of 48 or more men of the present and immediate past who are well known in national or international circles. Place the picture on one card, the name on another, on the third, his nationality, and on the fourth, the thing for which he is best known. The last card can contain more than one thing, if you wish.

The game is played like the History Game above, and requires the players to be familiar with the well known men and their deeds, also to be able to call them by name, and to know their nationality.

The same idea can be used by making a game of the famous men of Colonial History; or of the period of the Civil War; or of the great World War just passed. Do you know the face of Gen. Haig, his nationality and principal event of his life? To look up the information for the cards is a good history lesson in itself. Take the ideas of all these games and by using your Productive Imagination make them fit the needs of your study, or the things which you wish most to master.

STUDYING MATHEMATICS.

Children learn to count by using objects, in the school room they count the desks, the children, the number of cards, or blocks. The first lessons are object-lessons dealing with objects which can be handled and formed into groups. Digits are symbols which represent objects, 7+3=10, is an abbreviated form for 7 (Apples) and 3 (Apples) are 10 (Apples).

It is easier to teach addition and subtraction by the use of the objects to add to and to take away from. The realization of the process comes by seeing the objects and the result of the change. The digits become symbols for the objects that the child has been working with. Counting boards are helpful in teaching children, for they enable you to continue the visual process. All methods of teaching through the visual processes should be continued as long as possible.

The child's interest in the problem will be stimulated if he deals with objects, or things, and not with meaningless groups of figures. The problem 127+323+417= , is a meaningless one and uninteresting, but if you encourage him to think that this is the number of soldiers

with which a general is going out to meet an army of two thousand, then he has some interest in finding out how many men the general really has to meet the two thousand with. This makes the problem read thus, in his mind.

127 (soldiers) + 323 (soldiers) + 417 (soldiers)= How large an army?

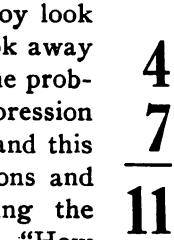
Figuring a page of problems will be uninteresting, but if you can encourage the child to introduce the imaginary objects, it will increase his interest.

Fractions are usually explained by the division of an apple or some easily divided object. Division, as a process of dividing a group of objects among a smaller group of children, is easily understood and interesting to them. Encourage your child to continue to think of the objects when dealing with fractions.

Visualization Always Aids.

All mental processes should take form in pictures. The adding of 4 and 7 should be seen in the mind's eye, if the problem is not written down. A parent tells the story of his difficulty with his son and this simple problem. The child got the idea fixed in his mind that 4 and 7 were 12. The father had told the boy that the answer was 11, and had the child repeat, 4 and 7 are 11, several times. But the original impression was still the stronger, and the next day, when asked by the father, "How many are 4 and 7?" the child's answer was 12. In some way this impression had become a very strong

one and was recalled before the weaker one of the correct answer, 11. The idea of visualization was brought to the father's attention during the day by his having attended a lesson in Memory Training given by the author. That evening he called the boy to him and said, "Son, how many are 4 and 7 tonight?" He received the same incorrect answer, 12. Then he took a piece of paper and wrote upon it the figures in exaggerated size, as illustrated on the right. He had the boy look at the problem for a moment and then look away and see it in his mind's eye, then look at the problem again. Thus he placed a visual impression of the correct answer in the child's mind and this became the stronger of the two impressions and was never forgotten. The next morning the father asked the boy the same question, "How many are 4 and 7?" and the answer was promptly given, "Eleven." "Why, I can just see those figures in my mind and I never will forget that."



This experience is the natural result of using the stronger sense of sight in preference to the weaker one of hearing. The conscious use of the mind's eye faculty in his arithmetic lessons brought this boy from the bottom of his class up to a reasonable grade in a very short time. Do not overlook the value of visualization. It can be applied with helpful results in any lesson or prolem.

The Mental Blackboard.

The child can easily learn to visualize his problems in mental arithmetic if he will begin while young. This is especially true if you have used the exercises for visualization given in the First Book. Those on mind's eye counting and the Number and Letter games are especially helpful. Their importance now becomes apparent, and if you have neglected them it will be well to go back and use them now.

Encourage the child to see the figures in exaggerated size on an imaginary blackboard; see large white figures on the blackboard. As soon as the problem is given, let the ear impression become a mind's eye picture, as illustrated. The use of this visual method is gradually being recognized as being valuable, and will in the future come into general use. Give your children the advantage and have them use it now.

$$\begin{array}{r} 7 \\ 5 \\ \hline 12 \\ \times 2 \\ \hline 24 \end{array}$$

Exercises in Manipulation.

The mind's eye picture of the figures on the mental blackboard can be enlarged by practice so that the child can visualize problems of some complexity. This ability, of course, will come only after continued practice. Start with simple problems and increase their difficulty as the child progresses. You will be surprised to find how he will be able to retain the figures in his mind and soon will be able to work with them.

Write on the blackboard a column of figures as illustrated below. (A small one in the house is of great value in child training. A yard of blackboard cloth can be purchased and hung on the wall.) Allow the child to look at them for a few seconds and write down the result of his addition. Do not have him write the numbers as in previous exercises, for visualization, but only the total.

```
 10
 12
  9
 16
```

Now, add the first two numbers of the first example, subtract the third and add the fourth, then write the total.

```
 15
 10
```

In the second example let him add the first two, subtract the third and multiply by the fourth, write the answer.

```
 14
  7
```

These exercises of manipulation can be varied in many ways. The length of the columns can be accommodated to the ability of the child.

Learning Rules.

All rules should be worked out in examples or illustrations and visually impressed upon the child's mind. One visual impression is equal to about twenty repetitions. Many times children get the idea that the problem cannot be worked unless the exact "Rule in the book" is followed. See to it that your children get a broader idea and that they understand the reason for doing a thing. The training in mathematics, that is of most value after school days are over, is, where we understand the reason

and have worked out for ourselves the correct result, independent of any set rule for working the problem. When helping the child at home give him practical examples from every day life as well as those in the book.

Fractions.

The first steps in fractions are often confusing to children, but need not be if they have been taught to be observing and to watch for the little aids which help over the difficult places.

Nominator and Denominator are two confusing terms to many. If you will show the child that most of the fractions that he has to deal with are proper fractions, and that the Nominator, upper number, is smaller than the Denominator, lower number, and that the same relationship exits between the words. Nominator.

De-nominator.

The Denominator is the denomination of the fraction, the Numerator is the number of parts. Let the D of Denominator stand for Down and remember that it is Down (lower) part of the fraction.

Many scholars have difficulty in giving the correct answer to the question, What are the three kinds of fractions? The following is all that is needed to fix the answer in mind.

Give the PROPER answer. If you give the IMPROPER you will be MIXED. These capitalized words are the three kinds of fractions.

Think of a fraction as a part of a whole. When the fraction becomes a whole, or more than a whole, it is Improper. It needs to be changed to make it a unit, or a Mixed fraction, a unit and a part.

The Multiplication Tables.

These are a problem which every one has to work with and because the use of them requires speed to be most valuable there must be a certain amount of repetition in learning them.

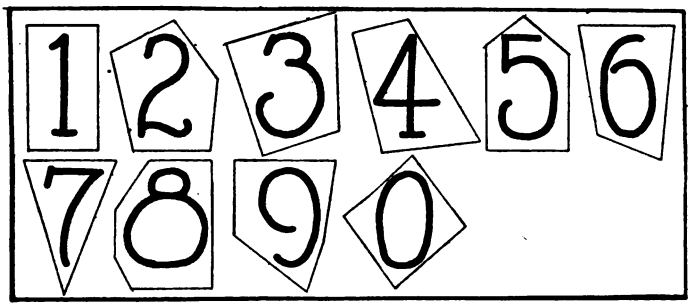
The Multiplication Game.

The aim is to teach children their multiplication tables by visual repetition and at the same time to introduce the game spirit thus to increase the interest and to prolong the period of effort without fatigue.

The child can work with these cards himself and thus by self instruction can learn this most difficult lesson of Arithmetic, and without any possibility of error, accuracy is insured.

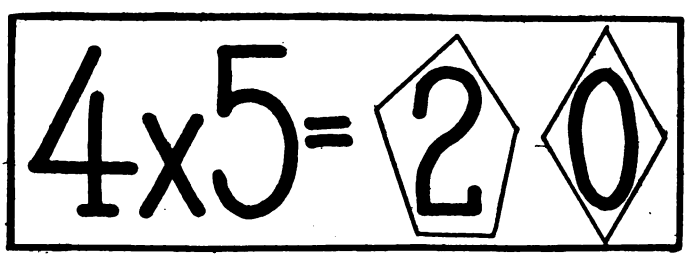
The equipment consists of a series of eleven pieces of cardboard about 2x6 inches on which are printed in large black numbers the tables without the answers.

A series of ten odd shaped cards is then made and the digits printed on them in bright red. The following are the suggested shapes for the ten digit cards.



(Digit cards should not exceed one and one half inches in height.)

The digit cards which are the correct answer to the table printed on the larger cards are then laid in the correct position and the shapes marked out. With a sharp knife cut out the shapes a trifle larger than the marked size of the digit card. The result is a card as illustrated, with the table and two holes of irregular shape into which the digit cards with the correct answer in bright red will fit. No other card but the correct one can be put into this opening, there is never any danger of the child seeing a wrong answer to the table.



The only cards which can be fitted into this table are the two and the cipher making the correct answer 20. This card with the black 4x5= and the bright red answer 20 will make a strong impression upon the brain of the child, and by use of the strongest sense, that of sight. At the same time he can repeat the table audibly and gain the added advantage of the ear impression.

Give the child only one set at a time so that he learns one table thoroughly. When he has learned it, mix the cards and place them one at a time in front of the child and see how many correct answers he can give without fitting the cards. In cases where there is hesitation have him fit the digit cards and make sure. See to it that he is accurate and certain.

After one table is well mastered make a similar set of cards for the next table. If you do not wish to take time to cut out the irregular shaped holes for the digit cards, the place can be blackened and the digit cards laid carefully on. The cut outs are far better and well worth the little effort necessary to make them.

For the tables up to 12's you will need the following number of digit cards, with these you will be able to work out any complete table of eleven cards. 10—1's; 8—2's; 6—3's; 6—4's; 10—5's; 4—6's; 4—7's; 5—8's; 4—9's; 16—0's.

After the child has learned two or three of the tables mix the cards, take any six and see how quickly he can fit the correct digit cards into place.

Keep him playing with these cards until he can give the correct answer to any question and give the correct table as a whole. After the tables have been learned you can make many tests of speed and competitive games with several children of the same age or school grade.

The Difficult Tables.

There are certain tables which seem harder for some than the others, yet there is often a difference as to which are considered most troublesome. The 2's, 3's, 5's, 10's, and 11's are easy for all of us. The 9's are as easily learned with the aid which follows. This leaves the 4's, 6's, 7's, 8's and 12's, remaining to work on. The combinations that are new in these tables are the following; all other combinations are known from the other tables:

4× 4=16	6× 6=36	7× 7=49*	8× 8=64*
4× 6=24	6× 7=42*	7× 8=56	8×12=96
4× 7=28*	6× 8=48	7×12=84	12×11=132
4× 8=32	6×12=72		12×12=144
4×12=48			

The first help in mastering these few necessary combinations is visualization. If you will print them in large figures and the answer in red, each table on a sheet or page by itself so that they can be handled and studied, they will form visual impressions that can be recalled with ease by most any one. This is especially true of children at the ages when they will be learning these tables.

Repetition seems the most valuable aid, but to be most advantageously applied it should be a combination of

[illegible] look at the
[illegible] made them,

[illegible] the tables
[illegible] impression
[illegible] these as
[illegible] For example,
[illegible] 4x=16, just
[illegible] will quickly
[illegible] or 4 more than
[illegible] of this it will
[illegible] in order to
[illegible] and 4x6, would
[illegible] the 4x7, and
[illegible] these known
[illegible] fix the one
[illegible] reliably at
[illegible] figured from the
[illegible] use.

[illegible] figures in this
[illegible] perceived, will

Notice that the two digits of each answer always add up to make 9, and that each first digit of the answer is just one less than the multiple. For example, 9x5=45, the answer will begin with one less than the multiple 5, and the two digits of the answer must add to make 9, therefore it can be nothing but 4 and 5, or 45. This is true in all cases except 9x11 an already known answer, but also only 9's in this answer. This simple idea, when once understood, will master the table of 9's.

Be sure that the children realize that 7x4 in the tables of 7's are the same in value as 4x7, so that the answer to 7x4 becomes familiar with learning the table of 4's. Ask the question both ways 7x4 and 4x7.

The Tables of Weights and Measures.

Some of these we learn easily and always retain; some always seem confusing. These can be mastered by the use of the Number Code and the Visual picture combined. Some examples follow:

24 sheets=1 quire, and 20 quires=one ream. The picture of Two Dozen Squires in a Nice Room, will fix these figures and terms in mind. Two Dozen is 24, Squires is a reminder for Quires. Nice is 20 (2 is N and 0 is C) and room a reminder for Ream.

16½ Feet=1 Rod, 320 Rods=1 Mile. Picture a Dish and a Half balanced on a Rod. Dish is your code word for 16 (1 is D and 6 is sh) and the Half Dish makes 16½ Feet on (in) a Rod. Next—Many's the Rod in a Mile. Many's is 320 or the number of rods in a mile.

visual and auditory repetition. Let the child look at the tables in the large form in which you have made them, while he repeats them.

Use addition and subtraction. In learning the tables there are always some which make a stronger impression and which the child will "never forget". Use these as starting points or bases of operation. For example, 4x5=20, all will recognize this at once. 4x4=16, just four less than twenty, and the subtraction will quickly give the correct answer. Also 4x6=24, or 4 more than the known point of 20. To take advantage of this it will only be necessary at first to learn 4x7=28 in order to master the entire table of 4's. The 4x4, and 4x6, would be figured from 4x5=20, and the 4x8 from the 4x7, and the 4x12, from the known 4x11=44. With these known bases to work from it is only necessary to fix the one starred combination in each table in mind indelibly at the beginning, the others will be easily figured from the known bases and will become fixtures from use.

The Table of 9's.

There is a peculiar combination of figures in this table of 9's, which, if once noticed and perceived, will make this one of the easiest of the tables.

9× 2= 18 (1+8=9)
9× 3= 27 (2+7=9)
9× 4= 36 (3+6=9)
9× 5= 45 (4+5=9)
9× 6= 54 (5+4=9)
9× 7= 63 (6+3=9)
9× 8= 72 (7+2=9)
9× 9= 81 (8+1=9)
9×10= 90 (9+0=9)
9×11= 99 (2 9's)
9×12=108 (1+0+8=9)

Notice that the two digits of each answer always add up to make 9, and that each first digit of the answer is just one less than the multiple. For example, 9x5=45, the answer will begin with one less than the multiple 5, and the two digits of the answer must add to make 9, therefore it can be nothing but 4 and 5, or 45. This is true in all cases except 9x11 an already known answer, but also only 9's in this answer. This simple idea, when once understood, will master the table of 9's.

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30 1-4 Sq. Yards=1 Sq. Rod. Picture—MISTER takes a yard stick and measures off a Sq. Rod. Mister is 3-0-1-4, or 30 1-4.

160 Sq. Rods=1 Acre. Picture—See a pile of Dishes out in the Acre being broken up by a rod. Dishes is 160 the number of Sq. Rods in an Acre.

640 Acres in a Sq. Mile. Picture—Take the Shears and cut up the mile into squares. Shears is 640, the number of Acres in a Sq. Mile.

792 Inches—1 Link. Picture—792 is Cabin, see the link hanging on the side of the cabin.

4 Rods=1 Chain. Picture—See 4 Rods wrapped around with a chain. 80 chains=1 mile. Your Code Word for 80 is Vase; put a chain around it and drag it a mile.

A few picture associations like these will help in fixing the difficult points in mind. Associations which you make yourself will help you most. Be sure to repeat them at intervals; make them permanent.

Pictures for Answers.

Familiarity with the Number Code given in the book on Memory, will aid the child in keeping the result of a problem. The numbers of the answer can quickly take the form of an object which can be translated again into the correct numbers. Many children will not be able to hold the visual picture of the digits for any length of

time. There is considerable difference in the ability to hold the visual picture of the digit 127. Many children, and adults, will be far more accurate and remember longer if they see a TANK, which is easily translated by the Code into 127, when the answer is wanted.

Learning Rules.

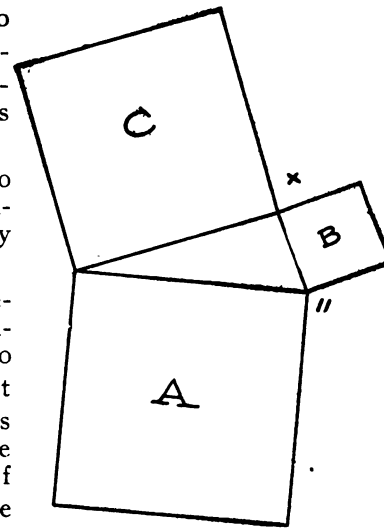
The exaggerated example illustrating the rule to be learned, will make its meaning clear and thus make the problem of learning it many times simpler than if it is learned as a group of words, the meaning of which is not always well understood. It is always best to understand the rule first and learn it afterwards. Use the suggestion given for learning verbatim and the exaggerated example as given in the suggestions in spelling. After you understand the rule it will not be difficult to memorize.

Visualizing Geometry.

The Theorem in geometry should have the visual process applied to it in the same manner. Make a strong picture of the figure which illustrates it. For example:

The square on the hypotenuse of a right angle is equal to the sum of the square on the other two sides.

To visualize the figure, as illustrated, will aid in fixing this Theorem in mind. Do the same with others. Another example of emphasizing the important lines as in the Theorem:



Two rectangles are to each other as the products of their bases by their altitudes.

In the illustration below the bases and altitudes are emphasized to remind you of the fact that they are the factors to be dealt with. Notice that in the first pages of the Geometry all simple figures are illustrated as explained or defined. Learn to visualize the problem with your book closed, work until you can see it clearly, and you will understand it better.

AIDS IN STUDYING CHEMISTRY.

Experiments in Chemistry are its most interesting phase. Let its problems take form in your visual mind and you will add to the enjoyment and also to the ease of your understanding.

A teacher of this subject, after appreciating the value and ease of visualization, worked out picture combinations of atoms which helped him greatly. He could see the two atoms of Hydrogen floating through the air and combining with the atom of Oxygen and could see the result of the combination.

Using the Initialing Idea.

The ideas which have been given in this and the preceding books can be applied in many ways to the problems of any subject. There is no attempt on the part of the author to work out all applications, but merely to suggest a few possible ones and leave the rest to the student. Each will think of different methods, and those aids which each one works out for himself will be most valuable and most easily recalled.

The Elemental Substances.

The six elemental substances of the organic world are: Carbon, Hydrogen, Nitrogen, Oxygen, Phosphorus, and Sulphur, which can be easily remembered by the following: The Organic World—Can Have No Other Principal Story.

The initials of each of the words following "World" stand for one of the elements.

Chemical Formulae.

Remembering of chemical formulae can be simplified very greatly by reducing the formulae to an idea using the initialing plan; for example, the formula for Wood Alcohol is CH3OH. This formula in itself has no meaning, and is difficult to carry in mind. By using the initials you can easily make some ideas which will represent this formula and help you to remember it, as for example: CAT HAD ham ON HAND. In this formula the C of Cat stands for Carbon, the H of Had for Hydrogen; Ham being a Code Word for 3 is indicative of 3 atoms of Hydrogen, and the O. H. is represented by the O and H of On Hand.

The formula for Glycerine is C3H5(OH)3, and can be remembered by the following idea: COME HEEL O HAM. In this example notice that the first letter of the word initials the substance and the last letter the number of atoms by the number code. As COME: C for Carbon, and M for 3. HEEL: H for Hydrogen, and L for 5.

O for Oxygen. HAM: H for Hydrogen, and M for radicle 3 times. Use which ever method suits you best.

The formula for Carbolic Acid, C6H5OH, or CASH HAUL O, HAY. The formula for Benzine, C6H6, or CASH HASH.

Hardness of Substances.

It is often valuable to know the degree of hardness of different substances, and these can easily be remembered by the following list. In degree of relative hardness the list is as follows, the hardest coming first.

Diamond	Apatite
Corundum	Bell Metal
Topaz	Boric Acid
Quartz	Rock Salt
Iridium	Kaolin

Take Kaolin as a basis. The number opposite each substance in the following list indicates its comparative degree of hardness in relation to Kaolin:

1	Kaolin	TIE	See tie on Kaolin
2	Rock Salt	SNOW	Poured over Rock Salt
3	Boric Acid	HOME	Built of Boric Acid
4	Bell Metal	WIRE	Swinging a Bell
5	Apatite	WHEEL	With a big appetite for running
6	Iridium	SASH	Irritating the wearer
7	Quartz	EGG	Quartz taken from an Egg
8	Topaz	IVY	To pass the Ivy
9	Corundum	WHIP	Made Cora run
10	Diamond	TOES	Set with Diamonds

In the list you have ten substances. Kaolin, the base, is 1, Rock Salt is 2, which indicates that Rock Salt is twice as hard as Kaolin. Iridium is 6, and six times as hard as Kaolin. Diamond is 10, which means that it is ten times as hard as Kaolin.

Learning this list by picturing reminders with the word of the Code list will enable you to easily recall these ten substances and the degree of hardness compared with Kaolin.

Atomic Weight Table.

Some students of Chemistry have learned the entire list of elements and their atomic weights. The following are a few examples of how the list can be arranged and learned. It will be excellent practice for you to use this method and make a list of your own.

	Element	Code No.	Reminder	Wt.	Code Word
1	Carbon	TIE	Carbine	12.005	Tin Sizzle
2	Hydrogen	SNOW	Hydrant	1.008	The Saucy Foe
3	Nitrogen	HOME	Night	14.01	Deer Sat
4	Oxygen	WIRE	Ox	16.0	Dash
5	Sulphur	WHEEL	Sulphur	32.06	Money Sash
6	Phosphorus	SASH	Fuss for us	31.04	Mad Sir
7	Sodium	EGG	Soda	23.0	Nome
8	Potassaium	IVY	Pot	39.1	Mop It
9	Calcium	WHIP	Calsomine	40.07	Horse Sack
10	Iron	TOES	I Run	55.84	Lily Fire
11	Arsenic	DOT	Arson	74.96	Gray Page
12	Gold	TOWN	Gold	197.2	Dipping In

Learning Foreign Vocabularies.

The principle of using a reminder can be applied with advantage in learning a foreign language. The majority may learn foreign words more easily and permanently by

the Reminder Link. In this case the reminder is the connecting link between the English word and the foreign word. Those who usually learn foreign words only by laborious repetition will find a saving of time in learning by the reminder link.

Spanish words:

English	Link	Spanish
cold	freeze	frio
drink	beer	beber
written	inscribed	escrito
sing	cantata	cantar
full	complete	completo
sweet	delicious	dulce
window	ventilate	ventana
keep	guard	guardar
sell	vend	vender

Latin Vocabularies.

Latin is the base from which most modern languages are derived, and you will find in English a very large proportion of the words taken directly from the Latin source. This makes the learning of Latin Vocabularies simpler than any other.

In a great many cases the word is a direct derivative and needs no reminder or intermediate step; for example, the Latin word ANIMAL is the same as in English, although pronounced differently; or Latin: ORNAMENTUM, and the English ORNAMENT. Be resourceful, draw upon your imagination. Note the following suggestions:

English	Reminder	Latin
boyish	puerile	puer
crown	coronation	corona
free	liberate	liber
land	terrace	terra
dog	canine	canis
think	cogitate	cogito
mind	mental	mentis (gen.)
running	current	curro
pleasing	gratifying	gratus
soldiers	militia	milites (pl.)
teaching	doctrine	doceo
more	majority	maior
unending	perpetual	perpetus
shortness	brevity	brevis
time	temporary	tempora (pl.)
faith	fidelity	fides

German Vocabularies become very much less difficult if you search for an intermediate step or reminder:

English	Link	German
fork	gobble	gabel
coffee-pot	coffee-can	kaffekanne
amusing	comical	komisch
ancient	old timer	alterthuemlich
easy	light	leicht
meat	flesh	fleisch
writing	scribed	schreiben
gloves	hand shoe	handschuh
quilt	bed cover	betdecke
walking	going	gehen
stove	oven	ofen
flowers	blooms	blumen
style	modes	mode
cloak	mantle	mantel
clock	hour	uhr

Studying Music.

The visual memory is the best memory for music. Many of the better musicians who learn music readily and remember it well have the visual memory. They can see the page, the bar, and the notes in the mind's eye. This ability can be developed in the child by the use of the exercises for visualization given in the first book When the child begins to study music give part of the time to practice of visualizing and memorizing music.

First, teach him to visualize a perfect clef. Draw imperfect ones on paper or slate and have the child tell what is the matter with them. Draw different notes and have him become thoroughly familiar with them by reproducing them. Have him draw the whole, half, quarter, and eighth notes, etc.

Teach the child the division of time by grouping the notes with reference to beats. Write a line of notes and have him divide them into groups of whole note value. Then indicate a certain time to be followed and have him divide other rows of notes into bars in accordance with the time indicated.

Teach the child the different rests by the same visual process. Have him write bars of music using the different rests and completing the bar of given time by filling in with the proper notes. Teach the use of sharps and flats and the difference in signatures by the same visual process. Let all practice be simple in the beginning and increase in complexity as he grows older.

Teach the child to combine the use of the eye and ear in musical practice. Have him transfer ear impressions to visual ones by seeing the notes on a staff as he hears the tone. Write a few bars of a familiar tune and have the child tell what it is.

Another application of the visual memory is to look carefully at the staff, then close the eyes and see it in the mind's eye, then look back and correct and improve the picture. Another plan is to see the staff exaggerated in size, covering the entire wall of the room. This exaggerated picture can be colored according to the above suggestions.

It will be helpful to take the piece which is to be memorized, and after fixing the picture of it in mind write it upon a blank staff. Keep improving this written copy of music, writing only that part of the score which is seen clearly. These methods will help to improve the visual ability to carry a picture of the page; and continuous practice with them will help in improving the ability to memorize in this way.

Be systematic in all your efforts. It is best first to memorize the words, then the air, then the technical part. A thorough understanding of the composition and its general plan will be of assistance.

In learning songs apply the principles given in the second book, and learn the words thoroughly. This will enable you to devote all of your time and attention to the technical part of the music. When you do not know

the words thoroughly your attention is divided between learning the technical part of the music and recalling the words. Better master one thing at a time and do that well.

Speaking In Public.

When you have trained your child's memory and created in his mind a feeling of confidence that he can remember what he wishes to say, there will be very little embarrassment connected with speaking in public.

Teach the child to use the Hitching Post idea in all matters of public speaking.

This subject was covered in Book Two and the following sample outline of the points of a talk "Hitched" to the Code Words will be helpful.

A patriotic speech made after the Declaration of War with Germany.

1 (Tie)—Volunteering for Service.
Young men are taking off their ties and waving them in the air rushing into the Enlisting Office.

2 (Snow)—Great Need of Shipbuilders.
A partly built ship covered with snow which men are shoveling away so others can go on with the work.

3 (Home)—Public Speakers for Propaganda.
Speakers going from home to home calling out to people and addressing them.

4 (Wire)—Conservation of Food.
Boxes of food being wound around with wire so that they cannot be wasted.

5 (Wheel)—Stopping Criticism of Government.
Setting a lot of men gagged and bound upon a large wheel.

6 (Sash)—Increasing Production.
Factory boss offering a wide, red, white and blue sash to the worker who makes the greatest increase in production.

7 (Egg)—Lend Your Savings.
Putting your savings in a large Egg and taking out Liberty Bonds.

Be original and make an effort. You will soon learn that these simple pictures will recall the points of the talk in the order in which you have arranged them. The hint is all the mind needs, if it gets the right start you will be able to say what you wish.

Review Your Studies.

An excellent method of mental development is to make a practice of recalling the occurrences of the day each evening. This is especially important for students. Time should be taken to sit quietly and review the facts and ideas of the day's lessons. Here is an excellent opportunity to urge your mind to think them over for yourself. There can be little growth of knowledge without independent thinking.

Review as much in detail as possible all of today's lessons before starting on the new. One reason you do not remember more of what you see, read, or hear, is that you do not review it. Reviewing carefully will very largely increase your stock of knowledge. It is not unreasonable to expect that some of the facts or experiences of the day's work and lessons will later become as important and valuable as a business man's papers. He does not hesitate to take time in the middle of the day to file these papers, or even to carry them to the vault. Teach the child to take a few minute in the evening and review the occurrences of the day and you will be surprised to see his mind begin to take on the retentive power of a vault.

The necessity of repetition will never be eliminated; it may by better methods be reduced to a minimum, but cannot disappear entirely. Some knowledge must be so familiar that it can be used habitually (by the subconscious mind) without the necessity of conscious effort, and this cannot become true without repetition.

Review Improves Observation.

Another result which is far from unimportant is the fact that this effort will develop the ability and the inclination to take notice of things as they transpire. Many examples can be given of the extreme value of this exercise, as the experiences of Thurlow Weed. He had the ambition to become a politician, but lacked one necessary requisite—a retentive memory. The above idea was sug-

gested to him by his wife. Mr. Weed practiced by recalling to his wife in the evening all the circumstances and happenings of the day. He was so greatly repaid for this effort that he continued this for many years. Mr. Weed says, "I am indebted to this discipline for a memory of unusual tenacity. I recommend this practice to all men who wish to store up facts and expect to have much to do in influencing men."

A Word To the Student.

The greatest lesson of education is thought. The thing you should be striving for and working toward is the ability to think clearly, logically and deeply. One of the greatest aids is the knowledge which is stored in your brain and which you are able to recall at will.

Your brain is not like sticking plaster, it is like putty; you must make an impression of the things you wish to retain. To make these impressions will always require an effort, no help will ever be devised which will enable you to remember without effort.

The ideas given to you in this book are aids, and you should become able to use them as such. The principles of memory are scientifically accurate and you need to become familiar with them and to use them to add to your success in study and progress.

Do not be like the carpenter who "is too busy to sharpen his tools", or like the drowning man who refused to grasp the rope because he feared it was not strong enough.

Use every idea that proves helpful and apply it in every possible way. There is no intent to give here all of the applications, but merely to give principles and to suggest one or two ways in which they have been used. The applications that are of most value to you are those you make for yourself. The principles will cover every need, if you will be resourceful in their use.

Get Out of the Rut.

Make an effort. Insist upon your brain waking up and "getting on the job" and doing its share. The old method of "learning by heart" requires a maximum of time and mental effort.

This visual method requires only a minimum of time and mental effort.

Time is of the utmost value to you. Dr. James tells us that over seventy-five per cent of our Mental power is dormant, asleep. Stir yourself. Put a Maximum of Mental Effort into a Minimum of Time; develop an accurate and retentive memory—a worthy servant to be at all times relied upon—the very foundation of your success. You can work wonders with yourself by intelligent and persistent effort.

The Capacity of the Visual Memory is Unlimited.

Faith is the Atmosphere in which Success lives.

Kill Mental Laziness. It has always been fatal—it is as deadly NOW!

It Can Be Done.

Somebody said that it couldn't be done,
But he with a chuckle replied,
That maybe it couldn't, but he would not be one
To say so until he tried.
So he buckled right in with a bit of a grin
On his face; if he worried he hid it.
He started to sing as he tackled the thing
That couldn't be done—and he did it.

Somebody scoffed, "Oh, you'll never do that—
At least, no one ever has done it,"
But he took off his coat and he took off his hat,
And the first thing we knew he'd begun it.
With a bit of a grin and a lift of his chin
Without any doubting or quit it
He started to sing as he tackled the thing
That couldn't be done—and he did it.

There are thousands to tell you it cannot be done,
There are thousands to prophesy failure,
There are thousands to point out, one by one,
The dangers that wait to assail you;
But just buckle in with a bit of a grin,
Take off your coat and go to it;
Just start in to sing as you tackle the thing
That cannot be done—and you'll do it.

—Edgar Guest.

While you are thinking it can't be done—somebody else is doing it.

CHAPTER TWO.

In this last chapter will be given applications of the memory principles which have been made by students. Some will be helpful to you, others will suggest ideas which you can change and adapt to your own problems.

Value of Forgetting.

Sometimes it is of as great value to be able to forget as it is to be able to remember. You have seen that each time you review a mental impression it becomes stronger and more deeply implanted in the brain. When using your Hitching Post for temporary purposes refuse to see the pictures after having used them, and your Hitching Posts will be free for filing any other information.

The unfortunate or embarrassing situations of life which you wish to eliminate from your mind can be forgotten by the same process. Each time you allow this circumstance to enter your mind you see again the conditions which you are trying to forget. This is just the thing you should not do. Each time you rehearse the subject you drive it deeper and deeper into your mind.

To forget you must refuse to review or to revisualize. There must be an utter absence of this circumstance from your mind. This will require some determination upon your part, and a little application of WILL POWER, but it is not a difficult thing to accomplish. The best method of eliminating a troublesome thought is to fill your mind with a pleasant one. When there is a tendency to recall that which you wish to forget do not deny it, but rather begin immediately to think of something entirely different and keep your mind continuously upon the new thought and the old will be completely eliminated.

To Remember Playing Cards.

Those who are interested in card playing will find in the following idea an excellent method of entertaining friends. It will also prove valuable in playing certain games, and above all, it is good practice for the development of your memory.

Remembering all the cards of a shuffled deck in proper order is an application of the Hitching Post idea and the Number Code. Have a word to represent each card in the deck beginning with the first letter of the series and ending with the Code Letter for the number of the card. For example HEAD would represent 1 of Hearts, H for Heart, and D the Code Letter for 1.

In this way the 2 of Hearts would be represented by Honey; the word Hem would stand for the 3 of Hearts. The word Hero would stand for the 4 of Hearts.

In the same way a list of words may be made to represent the Spade cards, each word beginning with S to stand for the Spades, and ending in a letter of the Number Code to represent the number of the card.

A similar list may be made for the Club cards, beginning with C for Clubs and for the Diamond cards beginning with D.

The following list of words has been prepared to cover the entire deck.

Card Words.

Cards	Spades	Hearts	Clubs	Diamonds
Ace	Seat	Head	Caddy	Dad
2	Sun	Honey	Coon	Dawn
3	Seam	Hem	Comb	Dam
4	Soar	Hero	Cur	Deer
5	Sail	Heel	Coal	Duel
6	Sage	Hash	Cage	Ditch
7	Sack	Hog	Cake	Dyke
8	Safe	Hive	Cave	Dive
9	Soup	Hobo	Cap	Daub
10	Seeds	Hods	Cuts	Deeds
J	Statute	Heated	Cadet	Dotted
Q	Stein	Hidden	Cotton	Detain
K	Steam	Hit'em	Cut'em	Daytime

By use of these words it is not difficult to take a deck of cards previously shuffled by some one, and to learn the position of each card in the pack. The first card will be represented by its corresponding word and visually associated with the first word of the Code List Tie. For example, the first card you find in the pack is

the 6 of Hearts, which is represented by the word HASH, and you simply make a picture of a TIE & HASH.

The second card might be the 4 of Clubs, which is represented by the word Cur, and made into a picture with the second word of the Code List, Snow.

The third card might be the 3 of Spades, in which case you would make a picture of Home and SEAM.

In a similar manner proceed to make a visual picture for each card in the pack, as you come to it, with the following word of your Code List. Then when you have gone as far as you wish, pick up the cards, being careful to keep them in the order in which you have learned them, holding them with their backs to you and their faces to those who are watching. In order to name the first card simply recall your picture with Tie which will bring to mind the word HASH, which stands for the 6 of Hearts. The second card will be Snow and CUR for the 4 of Clubs. The third card will be Home and SEAM or the 3 of Spades.

With practice you will be able to take the fifty-two cards of the deck. At first it is advisable to take only twenty or twenty-five, so that you can recall your pictures soon after they have been made. The more cards you take, the stronger picture you must make to hold it accurately in mind without review.

When the Picture is Clear and Vivid
the Memory is Dependable.

Mastering Robert's Rules of Order.

Everyone should be well posted regarding precedence of motion in Parliamentary Law. You may be called upon to decide such questions at any time. The worries of officiating in public will be reduced to a minimum if you will learn the proper sequence of motions through the following suggestions. It will require but a few minutes to do this. The following is a list of motions given in the order in which they take precedence. The motion which has precedence over all others is the motion, To Fix the Time to Adjourn, and is Number 1. The motion which takes precedence over all motions, except Number 1, is the motion, To Adjourn, and is Number 2.

Privileged Motions.

1—To fix the time to adjourn (non-debatable).
2—To adjourn (non-debatable).
3—Questions of privilege (debatable).

Incidental Motions.

4—Call for orders of day (non-debatable).
5—Appeal (debatable).
6—Objection (non-debatable).
7—To read paper (non-debatable).
8—Leave to withdraw motion (non-debatable).
9—To suspend the rules (non-debatable).

Subsidiary Motions.

10—To lay on the table (non-debatable).
11—The previous question (non-debatable).
12—To postpone to a certain day (debatable).
13—To refer to committee (debatable).
14—To amend (debatable).
15—To postpone indefinitely (debatable).
16—Main or principal motion (debatable).

In order to learn the sequence, it is simply necessary to make a Reminder Picture of the motion, and Hitch it to the corresponding number, which, of course, must be represented by the words in your Code List. For this purpose the following pictures are suggested, using the list of Code Words. The pictures given here are merely suggestions. Make any pictures which will serve to call the motion to mind.

1—TIE.—To Fix the Time to Adjourn.

See some men seated around a table playing a game of cards. The prize for the winner is a large red TIE lying on the table. One man points to the clock and says, "We will play until ten-thirty o'clock, and then go home." The TIE stands for 1, and the picture suggests fixing the time to adjourn.

2—SNOW.—To Adjourn.

See some people seated around a dinner table. Their attention is directed to the fact that it is snowing and they all rise and go home.

3—HOME.—Questions of Privilege.

See some people leaving a meeting and starting HOME, other jumping up and objecting, raising the question of their privilege to leave.

4—WIRE.—Call for Orders of Day.

See a messenger boy all bound up with WIRE, calling the orders of the day.

5—WHEEL.—Appeal.

See a man waving a WHEEL to gain attention and calling for an appeal.

6—SASH.—Objection to the Consideration of the Question.

See a member of the assembly pulling another away by a SASH, to keep him from getting a chance to ask a question which he wishes to have considered. The first man objects to the consideration of the second man's question.

7—EGG.—The Reading of Papers.

See an officer taking the papers out of a large EGG shell and reading them.

8—IVY.—Leave to Withdraw Motion.

See a man reaching over with a piece of IVY and trying to get a copy of the motion off from the desk.

9—WHIP.—To Suspend the Rules.

See a WHIP dangling a ruler suspended at its end.

10—TOES.—To Lay on the Table.

See a member come up and put his TOES on the table.

11—DOT.—The Previous Question.

See a man trying to cover the previous question with a large DOT.

12—TOWN.—To Postpone to a Certain Day.

See a town with posters all over it, with a large date referring to a committee of arbitrators.

14—DEER.—To Amend.

See some hunters trying to mend the DEERS antlers.

15—TOWEL.—To Postpone Indefinitely.

A TOWEL is rolled up and placed on a high shelf, its use is indefinitely postponed.

16—DISH.—The main or Principal Question.

See a large DISH carried in and put in the middle of the table, indicating that it is the principal dish.

The question of whether or not these motions are debatable is an important one. You will notice that each question is marked "debatable" or "non-debatable." The easiest way to fix this in mind is to take them in groups. Notice that the motions from 1 to 11 are non-debatable, and that the motions from 12 to 16 are debatable.

The exceptions to this fact are the motions 3 and 5 which are debatable. In our Number Code M stands for 3 and L for 5, represent the motions 3 and 5, by M and L, made into the word MULE. These are debatable, or can be "kicked" about, which idea is easily associated with MULE. This will always keep in mind that the only debatable motions of the first set are the motions Mule.

Another question is, which motions require a two-thirds vote to carry? They are the motions 6, 9 and 11. These three Numbers are represented by the words SASH, WHIP and DOT, which can easily be fixed in mind.

Whether the motion, TO LAY ON THE TABLE, or the motion, TO SUSPEND RULES, should have precedence can be decided by referring to your pictures. To suspend the Rules brings the picture of the Whip Suspending the Ruler from a string. To Lay on the Table brings the picture of a man putting his Toes on the Table. Whip is 9 and Toes is 10, therefore you know that to Suspend the Rule has the precedence.

Aids For Bible Students.

Many very helpful ideas for Bible study may be worked out by combining the different principles you have been studying in memory development. The whole Bible can become one great, moving Panorama. The picture can contain all the detail which you wish to remember.

The More Detail the Picture, the More Complete and Accurate your Memory.

Books of The Old Testament.

The following Reminder Picture story will aid in learning the sequence of the books of the Old Testament.

Genesis asked to leave a number of duties
Genesis Exodus Leviticus Numbers Deuteronomy

And for Joshua to Judge Ruth. Samuel saw
Joshua Judges Ruth 1 Samuel 2 Samuel

First and Second Kings Chronicle a crisis for Ezra
1 and 2 Kings 1 Chronicles 2 Chronicles Ezra

Nehemiah. Esther's Job with Psalms and Proverbs is to
Nehemiah Esther Job Psalms Proverbs

equalize the Songs of Solomon for Isaiah and Jeremiah.
Ecclesiastes Song of Solomon Isaiah Jeremiah.

The lamentations of Ezekiel dared Hosea and Joel
Lamentations Ezekiel Daniel Hosea Joel

to be a most Obedient Jonah. Micah and Nahum
Amos Obadiah Jonah Micah Nahum

had a cook Zephaniah haggard from carrying a
Habakkuk Zephaniah Haggai

sack of rye a mile.
Zechariah Malachi.

New Testament.

The following story will help in learning the books of the New Testament.

Matthew and Mark like the way John acts
Matthew Mark Luke John Acts

with Romans and one or two Corinthians. The
Romans 1 and 2 Corinthians

Galatians at Ephesus fill a Colossal
Galatians Ephesians Philippians Colossians

first and second thesis two times.
1 and 2 Thessalonians 1 & 2 Timothy

When Titus follows men He brews Games for two
Titus Philemon Hebrews James 1 & 2.

Peters, three Johns and Jude's relation.
Peter 1,2,3 John Jude Revelation.

Location of Passage.

The location of a verse can be fixed in mind by the use of Reminders and the Number Code. For example, remember the idea, "THE APOSTLES MADE A DOZEN". In this sentence "made" stands for Matthew, "dozen" stands for 10 and 2; or the Apostles are named in Matthew 10:2.

The names of the Apostles can be easily remembered by the following Reminder Story:

Peter and James join Philip Bartholomew
Peter Andrew James John Philip Bartholomew

to make Matthew James Thaddeus Zion's Justice.
Thomas Matthew James Thaddeus Simon Judas.

To remember where to find the Ten Commandments remember the two words "Extra Nice". Extra is a reminder for Exodus and Nice stands for 20th Chapter.

The story of the Prodigal Son found in the 15th Chapter of Luke is easily remembered by the idea,

"PRODIGAL SON LOOK DAILY". Look is a reminder for Luke, and Daily stands for 15th Chapter. The idea that the fond father looked daily for the Prodigal Son will be easily remembered.

Rhyme Often Helpful.

In every case possible take advantage of the fact that rhyme is easy to remember. There are many examples of this fact which have aided you in the past, as for example:

"Thirty days has September
April, June and November", etc.

There are many other common examples. The following is a good illustration of how information can be arranged in rhyme and thus aid materially in fixing it in mind.

Grammar by Rhyme.

Three little words you often see
Are Articles A, AN, THE.

A Noun's the name of anything,
As SCHOOL or GARDEN, HOOP or SWING.

Adjectives tell the kind of noun,
As GREAT, SMALL, PRETTY, WHITE or BROWN.

Instead of nouns the Pronouns stand:
HIS head, HER face, YOUR army, MY hand.

Verbs tell something to be done:
To READ, COUNT, LAUGH, SING, JUMP or RUN.

How things are done the Adverbs tell:
As SLOWLY, QUICKLY, ILL or WELL.

Conjunctions join the words together,
As men AND women, wind OR weather.

The Preposition stands before
The noun, as IN or THROUGH the door.

The Interjection shows surprise,
As OH! How pretty! AH! How wise!

The whole are called nine parts of speech
Which reading, writing, speaking teach.

Learning the Telegraphic Code.

An interesting and valuable application of the A, B, C, Hitching Posts and Visualization is made on the following pages as a basis of learning the International Code as used by the army and navy.

Many persons have learned the code in a few hours by this method, where it has taken days to master it by repetition. The Morse Code has only a few changes and can be learned by the same plan.

The Code in Pyramid Signal Form.

1	2	3	4
E.	T_	R._.	K_._
I..	M__	L._..	Y_.__
S...	O___	P.__.	C_._.
H....			X_.._
A._	N_.	U.._	G__.
W.__	D_..	F.._.	Z__..
J.___	B_...	V..._	Q__._

Note the Pyramid arrangement of the signals in groups of three and four. Also note that the signals in columns 1 and 3 begin with DOTS, and those in columns 2 and 4 begin with DASHES. Note that the signals in the adjacent columns are opposite. A is . _ ; opposite in the adjacent column is _ . N.

Learn the signals in groups as arranged.

As it is more difficult to translate from signal to letter, the following instructions are based upon learning from signal to letter. To learn in this manner will shorten the time necessary in becoming able to "receive" messages. Follow the instructions closely.

How to Learn the Code.

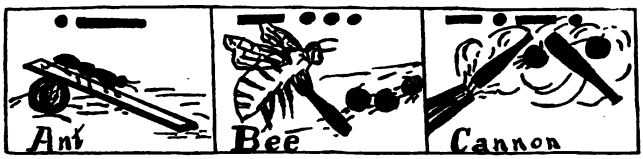
Each DOT or DASH of the signal is to be represented by an object which you can see or visualize. The alphabet letter is represented by an Object beginning with that letter.

The signal objects and the letter objects are then grouped into a picture. This picture visualized and reviewed a few times can easily be recalled either from letter to signal, or from signal to letter.

In all signals beginning with a DOT or DOTS, the dots are represented by big Yellow Oranges and the dashes by thick board Planks.

In all signals beginning with a DASH or DASHES, the dashes are represented by Baseball Bats, and the dots by big red Apples.

Picture Illustration.



A in this picture is represented by an ANT. The dot is represented by an ORANGE on which the PLANK is resting, the plank represents the dash. Down the plank walks the Ant. See the picture and the motion of the Ant walking on the plank. See all pictures large in size and in motion. To close your eyes will help you to see the picture clearly. In each case make a large Moving Cartoon of the objects. Review by seeing the same picture each time.

ANT—ORANGE—PLANK, .– is A.

B is Honey Bee, with a BAT (dash) batting three APPLES (dots)along the ground. See the BEE—BAT—APPLE—APPLE—APPLE. –... is B.

C is a Cannon out of which is being shot a BAT (dash), an APPLE (dot), a BAT (dash) and an APPLE (dot). See the CANNON—BAT—APPLE—BAT—APPLE. –.–. is C.

In the same manner see clearly the pictures described for the code signals following.

. E, an Orange balanced on the smokestack of an Engine, . is E.

.. I, two Oranges rolled at an Ink bottle. See ink spilled on the oranges, .. is I.

... S, three Oranges sticking in a Snowdrift. See bright yellow oranges, ... is S.

.... H, four Oranges, one between each of the fingers of your Hand, ... is H.

._ A, an Orange, a Plank, and an Ant, as pictured above.

.__ W, an Orange with two Planks leaning on it, a Wolf runs up one plank and down the other, .__ is W.

.___ J, a Jockey picks up a big yellow Orange and carries it across the street by walking upon three Planks laid zig-zag, .___ is J.

.._ R, an Orange on each end of a Plank, a Rat is carrying the Plank in his mouth, .._ is R.

.._. L, an Orange on the left end of a Plank and two Oranges on the other end, all are balanced on the back of a lamb, .._. is L.

.__. P, an Orange placed on the ground by a Pig, he then walks across two Planks and places an Orange at the other end, .__. is P.

..._ U, two Oranges floating on the sea, up comes a U-boat, pushes them apart and crashes into a Plank, ..._ is U.

..._. F, two Oranges left on the end of a Plank and one on the other end, a Fire burns the Plank in two, see the Oranges roll into the Fire, ..._. is F.

(Note the difference in location of the two oranges in L and F.)

...._ V, three Oranges hanging on a Vine, you take a Plank and knock them off, ..._ is V.

_ T, a Bat used for pounding Tea leaves, _ is T.

__ M, two Bats being swung in the air by a wild Monkey, __ is M.

___ O, three Bats stacked on end, along comes an Owl and carries them away, ___ is O.

_. N, a Bat being used to knock an Apple from a tree by a Nun, _. is N.

_.. D, a Bat used to bat two Apples against a Door; _.. is D.

_.... B, a Bat and three Apples pictured with a Bee, as given above, _.... is B.

_._ K, a Bat sticking on one side of a Kettle and a big Apple between it and another Bat on the other side of the kettle, _._ is K.

_.__ Y, a Bat used to bat an Apple into the YMCA hut, two fellows inside pick up two more Bats and swing at the Apple as it passes, _.__ is Y.

_._. C, a Bat, an Apple, a Bat and an Apple, pictured with a Cannon above, _._. is C.

_..._ X, a Bat, two Apples and a Bat laid out upon a table to be photographed by an X-Ray machine, _..._ is X.

--. G, two Bats leaning together with an Apple placed on top, along comes a Goose and grabs the Apple, --. is G.

---. Z, two Bats with two Apples tied on the other end and swung over the back of a Zebra, the Bats on one side, the Apples on the other, ---. is Z.

---- Q, two Bats and an Apple roll into a Quilt and swung on the end of another Bat to carry over your shoulder, ---- is Q.

Go over the pictures a section at a time as pyramided. See them in large size and in motion. Do this several times. Have some one call the signal to you. See the ORANGES and PLANKS, or the BATS and APPLES and the picture they form. The object pictured with them brings the corresponding letter to you.

Note that all signals beginning with a DOT are pictured with ORANGES and PLANKS. All signals beginning with a DASH are pictured with BATS and APPLES.

By this simple method you are guided at once to your picture. When this signal is given ... - at once you know it is two oranges and a plank. This brings the picture of the U-boat dashing between the oranges and striking the plank. After a few repetitions the process will become instantaneous.

Go over the alphabet forward and backward and in each case SEEING and speaking the object used to represent the letter. Thus:

A—Ant	H—Hand	O—Owl	U—U-boat
B—Bee	I—Ink	P—Pig	V—Vine
C—Cannon	J—Jockey	Q—Quilt	W—Wolf
D—Door	K—Kettle	R—Rat	X—X-Ray
E—Engine	L—Lamb	S—Snow	Y—YMCA
F—Fire	M—Monkey	T—Tea	Z—Zebra
G—Goose	N—Nun		

For practice go over the alphabet and see the object and picture of the signal. Thus, A is Ant, see the ant walking down the plank which is resting on the orange. Repeat the signal A .– Orange, Plank. Do this a few times till all pictures are clear and come quickly.

Let all your alphabetical practice be by seeing the picture and speaking the signal. Thus, A, see the picture and speak the signal, Dot, Dash.

See to it that most of your practice is from signal to letter. This is "receiving" and requires the most practice.

In your odd moments go over signals, thus, ––.– two bats, an apple and a bat (wrapped in a Quilt) Q.

.–– an orange and two planks (the Wolf walks over) W.

Pictures insure accuracy, depend upon the picture . Practice is the only possible method for developing speed.

The Knight's Tour.

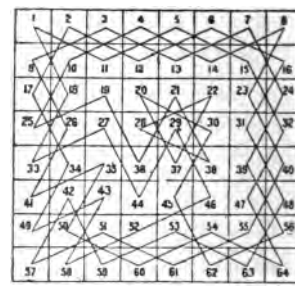
Chess players find a great deal of interest and amusement in being able to remember the moves necessarily

made by the Knight in touring the board, stopping once on each square, and never more than once on any square.

One of our great mathematicians put in a great deal of time working out the proper moves of the Knight in touring the board in this manner. It is a simple matter for the memory student to keep in mind the necessary moves in their proper order. This would be an almost impossible feat without the aid of your number code, as there are sixty-four different moves to be made by the Knight in this tour.

The problem is to call from memory each move of the Knight, beginning either at square No. 1, or in fact any square of the board. Notice that the squares are numbered from 1 to 64, each row of squares always numbering from left to right. The following cut illustrates the method of moves. The Knight always moves two squares in one direction, and one in the other, indicated by a diagonal line drawn from 1 to 11, and from 11 to 5, Thus you will see, beginning with square No. 1 that the move of the Knight will be as follows:

1, 11, 5, 15, 32, 47, 64, 54, 60, 50, 35, 41, 26, 9, 3, 13, 7, 24, 39, 56, 62, 45, 30, 20, 37, 22, 28, 38, 21, 36, 19, 25, 10, 4, 14, 8, 23, 40, 55, 61, 51, 57, 42, 59, 53, 63, 48, 31, 16, 6, 12, 2, 17, 34, 49, 43, 58, 52, 46, 29, 44, 27, 33, 18 and back to 1.



To remember these moves in their proper order is an excellent application of the Hitching Post idea, and use of the Code List representing the moves in consecutive order as 1, 2, 3, 4, etc., and any word with it that will represent the number of the square to which the Knight is to move. The list following begins with the first square as the starting place.

Tie	and	Hut	Town	and	Riot
Snow	and	Dude	Dime	and	Hinge
Home	and	Owl	Deer	and	Ape
Wire	and	Doll	Towel	and	Ham
Wheel	and	Maine	Ditch	and	Team
Sash	and	Rug	Duck	and	Oak
Egg	and	Cherry	Taffy	and	Snare
Ivy	and	Lawyer	Depot	and	Imp
Whip	and	Chess	Nose	and	Latch
Toes	and	Lace	Net	and	China
Dot	and	Mill	Nun	and	Reel

Follow on through the sixty four moves using the code words for the sequence of the move and any words you wish that stand for the number of the squares on the board.

When you have pictured all the objects together, the first object will keep the sequence of the moves clearly in mind, and the second will reveal the number of the square to which the Knight is to move. You can very quickly go over the pictures and give the moves of the Knight. The first move, Tie, begins with Hut or square No. 1. The second move Snow is Dude or square 11; the third move Home is Owl or square 5; the fourth move

Wire is Doll, or square 15; the fifth move Wheel is Maine, or square 32. Each move is represented by the picture which you have with the succeeding word of your code list.

As soon as you are familiar with these pictures you can begin with any square designated. If you are asked to begin with square 24 you know that 24 is Snare which is pictured with Taffy. Taffy is 18 so you begin with the 18th move.

Knight's Tour by Story.

Another method of following the Knight's tour is to learn the following story, the words of which are based upon the Number Code, each word giving the number of the square to which the Knight should move next. The story begins with the square 1. After you have learned the story, go over it and instead of saying the words, speak the number of the square as represented by the word of the story. This first sentence is an example: THE TIDE is LOW, a TALL MAN is ROWING. These words represent the following figures: 1, 11, 5, 15, 32, 47.

First learn the story, then practice until you are able to go over the whole thing and speak the figures 1, 11, 5, etc. After you are thoroughly acquainted with the number values of the words you can allow the persons looking on to select any square on the board as the starting place. For instance, if square 32 should be selected you would know that the word MAN stands for 32, and so you would begin with MAN. The next move would be

the next word, ROWING (47), and so on through the story. When you come to the end of the story you must go back to the beginning and work forward to the word MAN, so as to cover the entire board.

To learn the Knight's tour is excellent training, and gives you an excellent method of entertaining your friends, as they will scarcely believe it possible that you can remember the 64 moves without error.

The Story for the Knight's Tour.

The Tide is Low a Tall Man is Rowing. A Cheery
1 11 5 15 32 47 64

Lawyer Chose Lazy Mollie Reed. A Hinge By My Team.
54 60 50 35 41 26 9 3 13

A Key Near a Mop. A Slouchy Jane Roll a Mouse to a
7 24 39 56 62 45 30

Nice Meek Nun. Knave Move Not so Much Stop as a
20 37 22 28 38 21 36 19

Snail Does. Her Dear Foe Nome, Rose Slyly Shot Lead
25 10 4 14 8 23 40 55 61 51

Like Rainy Slop. A Lame Chum Arrive Mad as Dutch.
57 42 59 53 63 48 31 16

Joe Dine Now, Take More Ripe Rum. A Live Lion Rush
6 12 2 17 34 49 43 58 52 46

a Snob. Warrior Sneak Mama a Dove.
29 44 27 33 18

A Last Word.

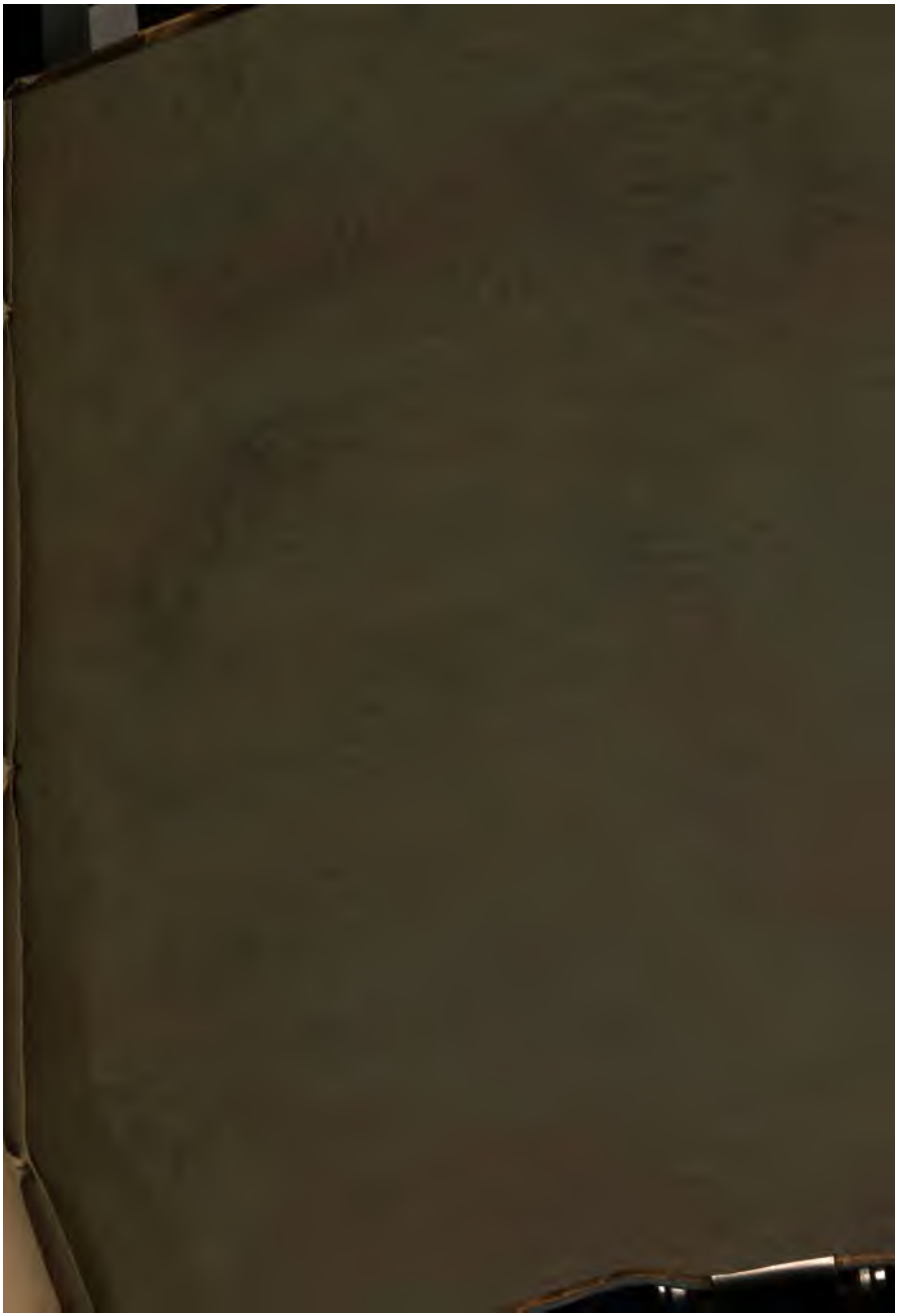
"Memory is the foundation without which there can be no structure of knowledge." On the other hand, there can be a good foundation and very little structure. The story is told of a fool who was placed under the charge of a country clergyman. The young fellow would sit in church on the Sabbath and was able to remember almost every word of the sermon. He could tell afterwards where every one sat, and what they wore, but he was good for very little of anything else.

A reporter in the House of Commons could sit for hours without taking notes and write the full speeches for his paper, but he had very poor judgment and was an utter failure in life.

Do not neglect the development of your memory, but do not go to the extreme, so that you neglect other factors of mentality and character. Strive always to gain a fully rounded education and development. Develop the Common Senses; make them keen, alert and useful, and you will not lack in Common Sense.

Great buildings, great characters, great minds and great memories are not built in a day. But a few minutes a day of persistent effort will win. In the words of Michael Angelo:

"Trifles make perfection, but perfection is no trifle."



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